15¢ A COPY

The OIL WEEKLY

Exclusively Devoted To The Production and Transportation of Oil and Gas

Engineering News Statistics

August 22. 1930 **Volume 58. No. 10**

The success of the original Hughes Rock Bit gave such impetus to the rotary method of drilling that later years saw this method adopted in the majority of the oil fields of the world. During the past two decades the Hughes Rock Bit has been perfected until today its design is accepted as standard by other manufacturers . . . however, the continuous improvement of Hughes Tools embraces more than design . . . it embodies the qualities "built into" the product . . . qualities that insure maximum performance

Service Plants
Los Angeles
Oklahoma City

HUGHES TOOL COMPANY
Main Office and Plant
HOUSTON, TEXAS

Export Office
Woolworth Bldg.,
New York City

CLARK

ACCESSIBILITY

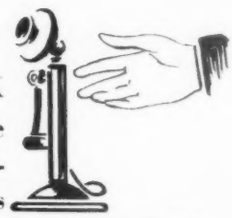
is Another Factor in CLARK Leadership

All Controls are Concentrated at one place—Safe for operator.

All necessary Adjustments Easily and Quickly made.

Large Openings to Crosshead and Glands.

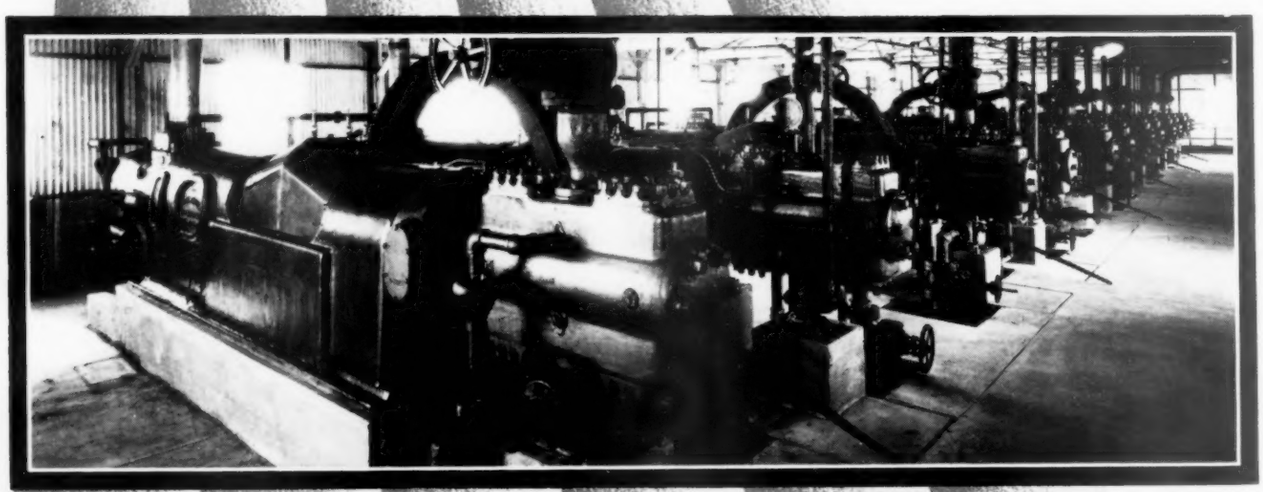
Large Openings, Side as well as Top, to get at Crankpin Box.



Operators like CLARK Engines because they are as accessible as the telephone on a desk. This accessibility also means important money savings to add to the economies effected through CLARK *efficiency* and rugged *durability*.

CLARK BROS. CO.
OLEAN, N. Y.

Export Office: 150 Broadway, New York, N. Y. *Mid-Continent Sales Offices:* Tulsa and Fort Worth. *Warehouses:* Tulsa; McCamey and Sweetwater, Texas; Artesia, N. M. *California:* Smith, Booth, Usher Co., 228 S. Central Ave., Los Angeles.



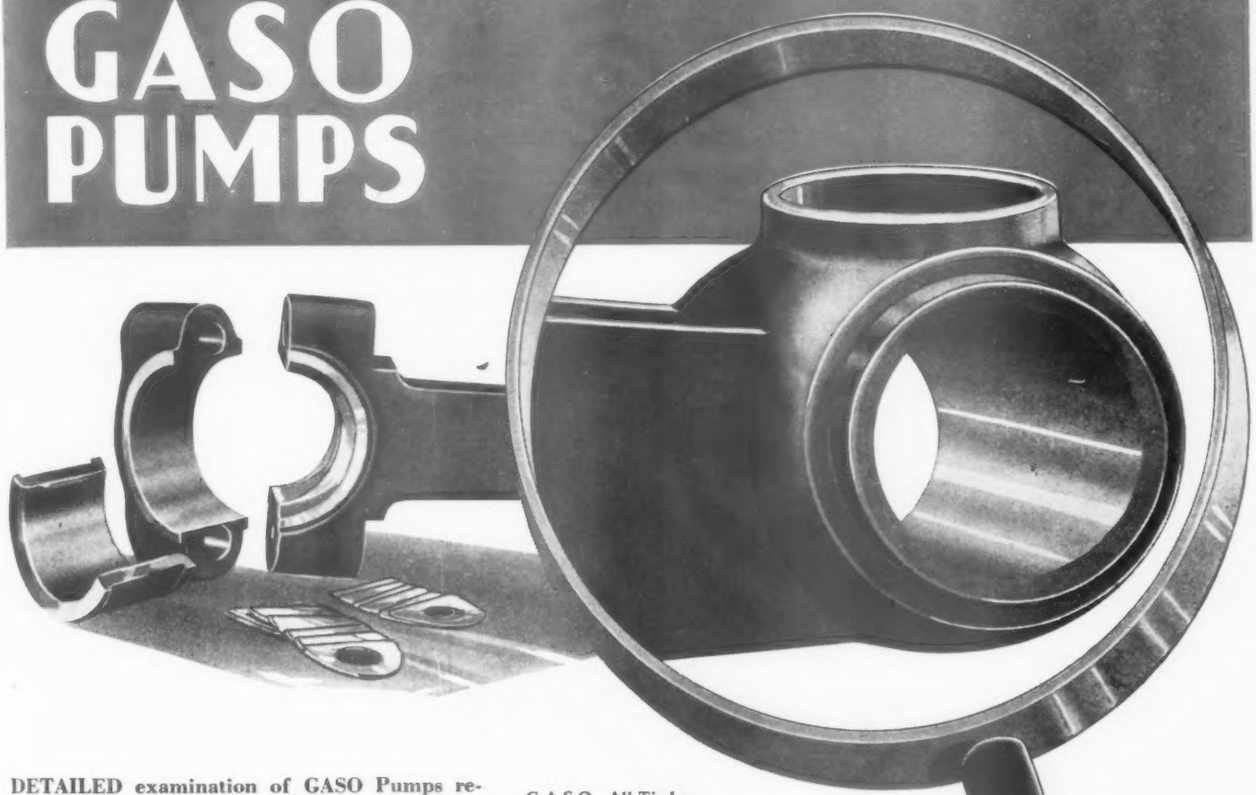
200 H.P. CLARK "Super 2s" in Wirt Franklin Plant No. 1 at Oklahoma City

CLARK

Direct Gas Engine Driven Compressors

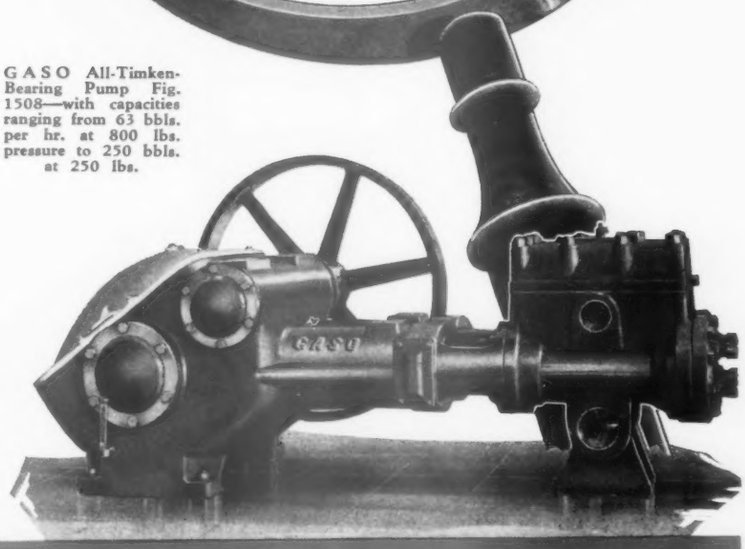
The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Study the DETAILS of GASO PUMPS



DETAILED examination of GASO Pumps reveals clearly why these pumps are so efficient in the use of power, so durable and so economical to maintain. For example note the connecting rods of GASO Fig. 1508 Enclosed Duplex Power Pump . . . . made of best grade open hearth steel, H construction, heavy yet carefully balanced, removable babbitt lined steel shell at crank-end, crosshead end fitted with bronze bushing, and all bushings honed to a highly polished finish. In *every* detail GASO Pumps are designed and built for easy running, long life and ease of adjustment.

GASO All-Timken-Bearing Pump Fig. 1508—with capacities ranging from 63 bbls. per hr. at 800 lbs. pressure to 250 bbls. at 250 lbs.

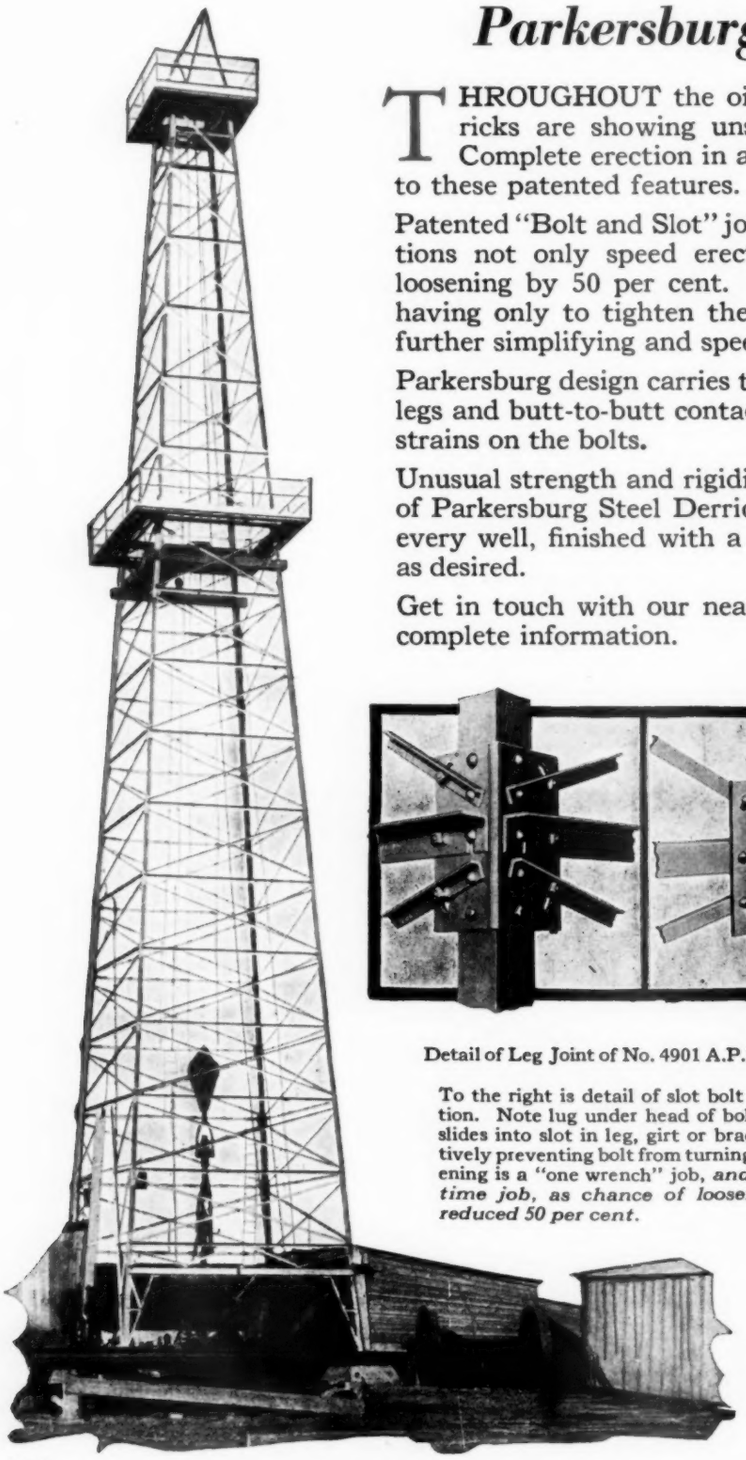


GASO PUMP & BURNER MFG. COMPANY
Tulsa, Okla., U. S. A.
Dallas, Texas New York, N. Y.

GASO PUMPS
for every oil industry need

Patented Features Make

Parkersburg Construction Gives



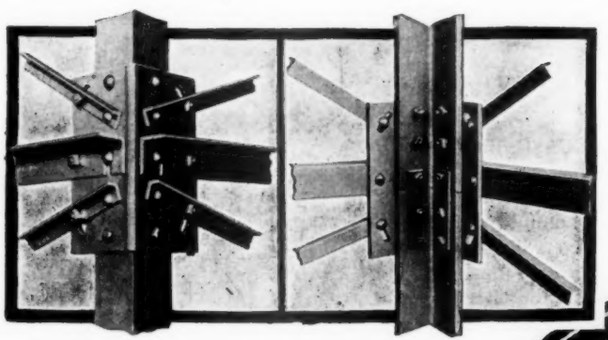
THROUGHOUT the oil country Parkersburg Steel Derricks are showing unsurpassed erection speed records. Complete erection in a day is a common occurrence, due to these patented features.

Patented "Bolt and Slot" joints for girt, brace and leg connections not only speed erection but lessen liability of bolts loosening by 50 per cent. Rig builders' time is reduced by having only to tighten the nuts. Legs are interchangeable, further simplifying and speeding erection.

Parkersburg design carries the load *straight* down the derrick legs and butt-to-butt contact of leg joints eliminates all shear strains on the bolts.

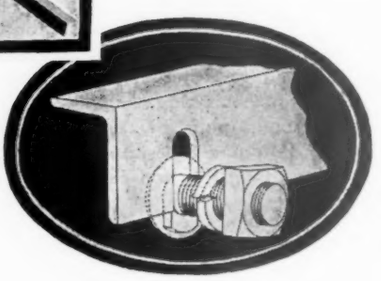
Unusual strength and rigidity are assured by the construction of Parkersburg Steel Derricks. There is a size and type for every well, finished with a coat of aluminum, or galvanized, as desired.

Get in touch with our nearest field representative today for complete information.



Detail of assembly at left shows outside and inside view of a joint, with girts and braces in position. Note how slots in leg sections and joint plates engage bolts; also gusset plates for increased bearing surface and how butt-to-butt contact is made.

Detail of Leg Joint of No. 4901 A.P.I. Derrick



To the right is detail of slot bolt connection. Note lug under head of bolt which slides into slot in leg, girt or brace, positively preventing bolt from turning. Tightening is a "one wrench" job, *and a one-time job, as chance of loosening is reduced 50 per cent.*

102-A

THE PARKERSBURG RIG AND REEL CO. TRADE MARK REGISTERED

THE PARKERSBURG RIG AND REEL COMPANY

"Erection in a Day" Easy

Added Strength for Any Service

Parkersburg Products

Steel Derricks and Crown Blocks

Rig Irons

Portable Drilling Machines
(Wood and Combination-Steel)

Chain-Driven Sand Reels and Bailing Reels

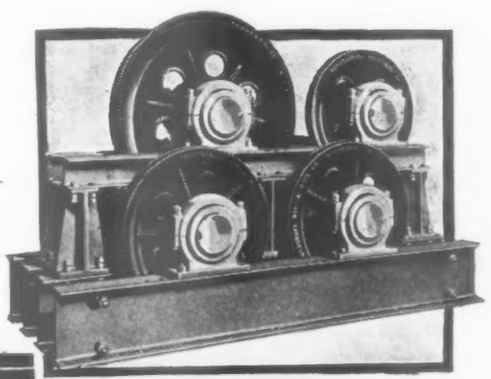
Steel Wheels—Bull, Calf and Band

All-Steel Standard Rigs

Bolted Steel and Aluminum Tanks

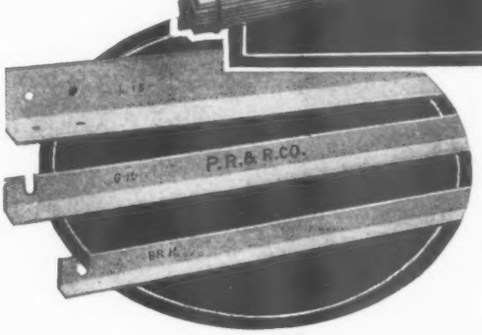
Miscellaneous—Drilling Equipment Steel Walking Beams and Pitmans

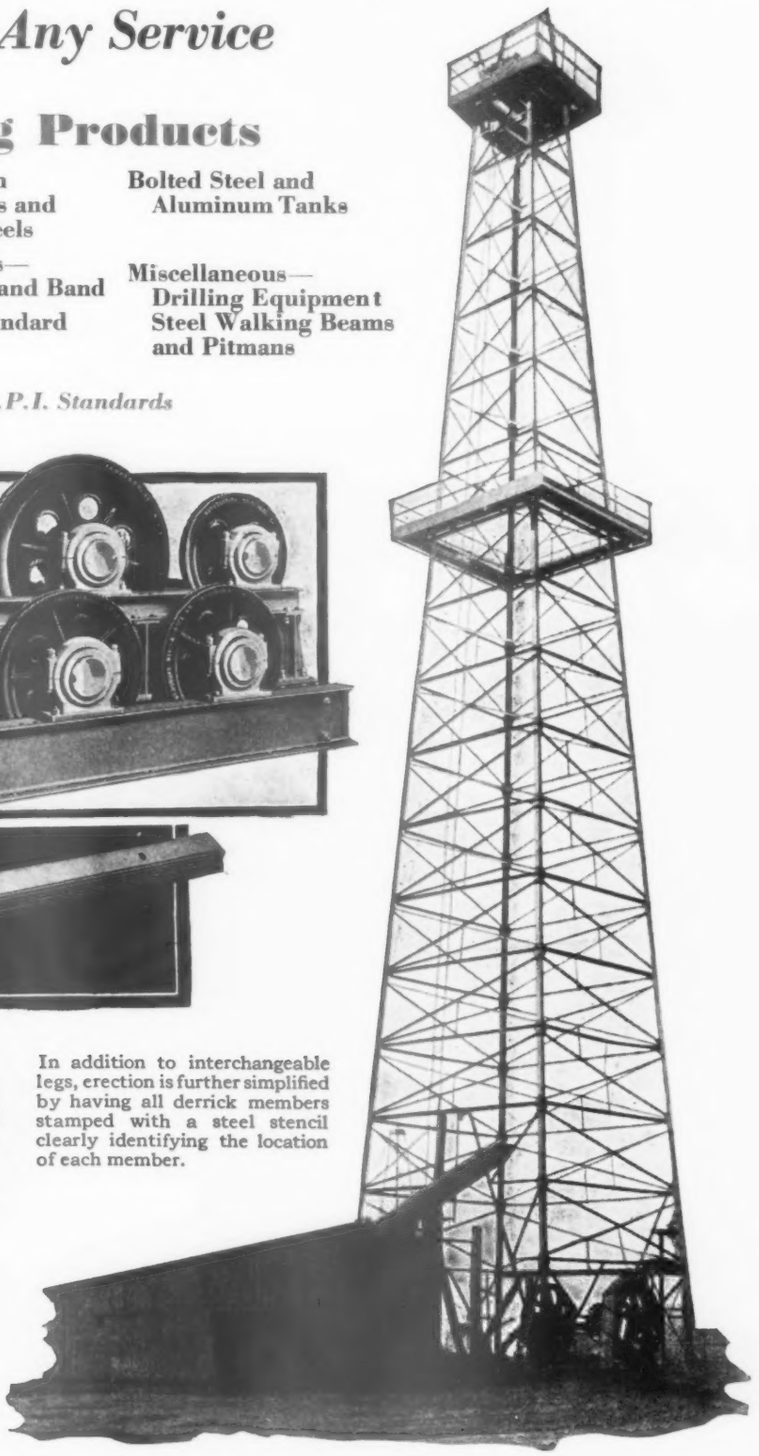
We Subscribe to A.P.I. Standards



A Parkersburg Roller Bearing Crown Block makes a perfect combination with Parkersburg Steel Derricks. These new Crown Blocks are a quality product designed to meet all oil-field requirements. Built in single and double-deck types, with self-aligning roller bearings with positive acting Alemite lubrication. Manganese Sheaves are optional. These Parkersburg Crown Blocks stand the severe test of deep drilling service.

All derrick members are delivered in convenient bundles weighing not more than 125 pounds.





In addition to interchangeable legs, erection is further simplified by having all derrick members stamped with a steel stencil clearly identifying the location of each member.

Main Offices and Works

PARKERSBURG · WEST VIRGINIA

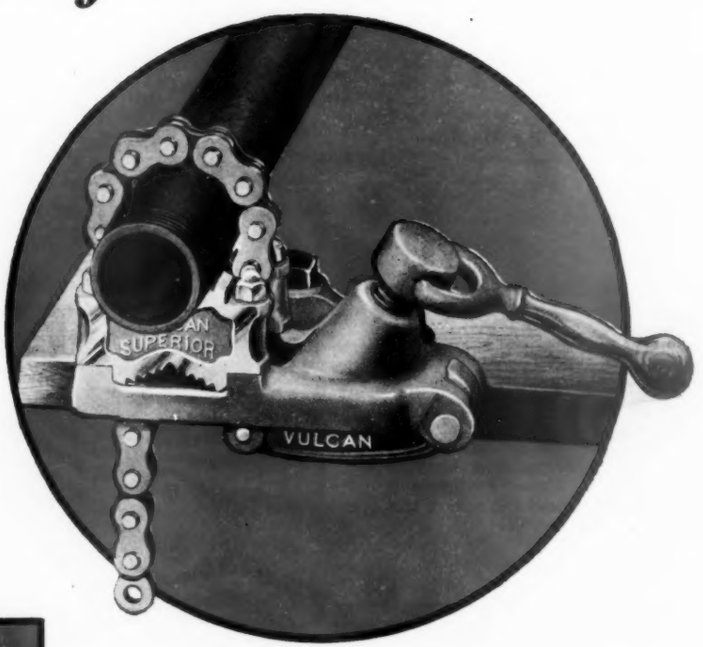
NEW YORK - - - TULSA - - - FORT WORTH - - - HOUSTON

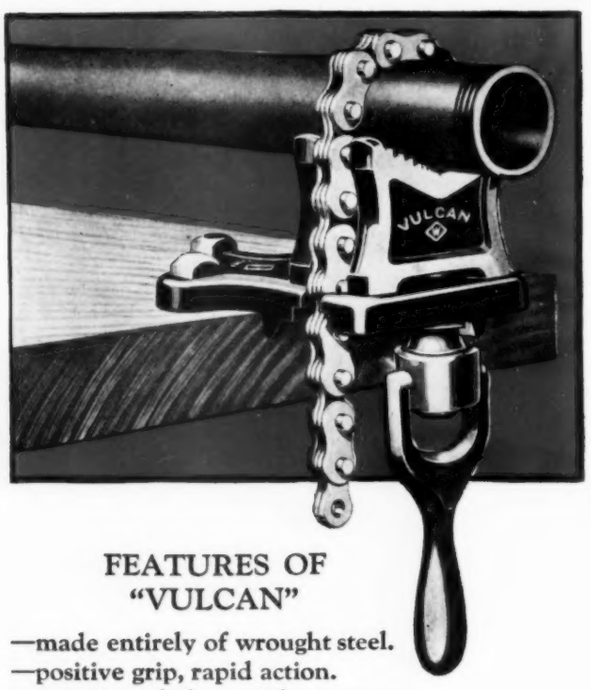
Branches In All Active Fields

2 WILLIAMS' "VULCAN" VISES *ready for your roughest, toughest jobs*

Genuine Williams' Vises are furnished in two patterns; "Vulcan Superior" with its "above the bench" adjustment and the long famous "Vulcan"—the *original* chain pipe vise. All Williams' vises are wholly made of tough wrought steel, with drop-forged jaws, base and handle. No castings are tolerated. Chains are of genuine "Vulcan" quality. Williams' vises are built for long, hard service and are fully guaranteed. Ask for literature.

J. H. WILLIAMS & CO.
"The Drop-Forging People"
New York BUFFALO Chicago





FEATURES OF "VULCAN"

—made entirely of wrought steel.
—positive grip, rapid action.
—compact, light weight, extreme strength.
—Standard finish, with orange panel in jaws.

4 sizes for 1/8 to 8″ pipe.

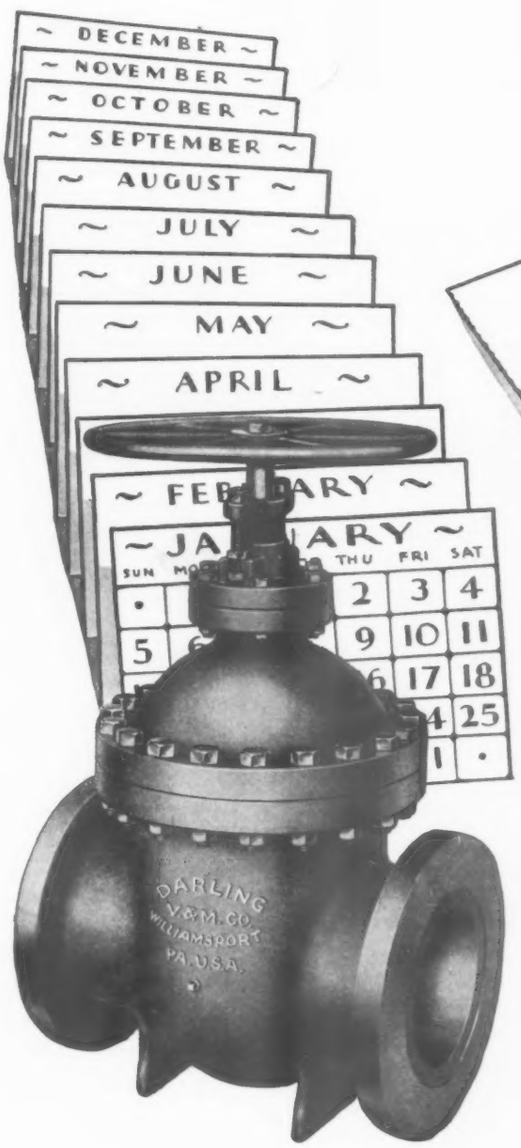
FEATURES OF "VULCAN SUPERIOR"

—"overhead" adjustment. The handle is on top—easy to operate.
—reversible jaws — When the teeth wear, simply unscrew the bolts and turn the jaws over. Double life.
—larger capacity — Each vise takes pipe ½ inch larger than others of a similar size.
—supplied in 2 styles of finish:—
A—Chrome-plated over nickel
B—Standard, with orange panel in jaws.

2 sizes for ⅛ to 4½″ pipe.

GENUINE WILLIAMS
SUPERIOR DROP-FORGED TOOLS
"VULCAN"
CHAIN PIPE VISES

Think of the Purchase Cost as Rent for the Valve's Life-



Darling Valves cost the least per year ~ ~ ~

You pay more for the Darling valve than you do for others — granted. But — certainly it is performance over a long period of time that you want. If you divide the great number of years of service in the Darling Valves by their cost you will find the Darling Valve gives you the best performance at a decidedly lower yearly expense.

DARLING VALVE & MFG. CO.
Williamsport, Pa.

New York Oklahoma City Houston

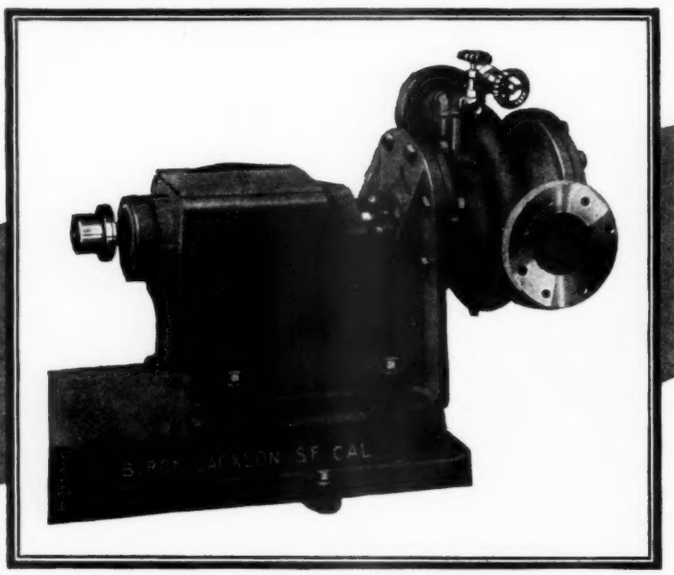
Mid-Continent Distributors:
Frick-Reid Supply Corp. International Supply Co.

Foreign Sales Manager:
H. M. Hein, Room 1405, 152 West 42nd Street, New York

DARLING GATE VALVES

fractionating PUMPS

THE first sixteen of these pumps built have been in continuous twenty-four hour operation for three years without shutdown or repair. Impellers are designed to give a flat discharge characteristic, enabling the pump to deliver greatly increased volumes of fluid, if the head is decreased slightly. Centrifugal pumps, unlike positive displacement pumps, are subject to volumetric control, permitting the operator to maintain practically constant levels in the series fractionating towers. The pump has but one water-cooled stuffing box and provision is made for water quenching the gland to prevent flashing. The pump case has only one circular joint, kept tight by means of numerous stud bolts, and a metallic gasket. The rotating element may be removed from the case by taking off the outboard cover without disturbing pipe connections or the driver. These single stage pumps are constructed in a complete range of sizes for heads up to 150 feet. For higher discharge pressures, pumps having two or more stages are employed. Also centrifugal pumps for every refinery service.



SINCE 1872

BYRON JACKSON CO.

Factories: BERKELEY, Los Angeles, Visalia, Calif.

Branches: NEW YORK and CHICAGO

San Francisco, Portland, Salt Lake, Tulsa, Dallas, Phoenix

BYRON JACKSON

CENTRIFUGAL PUMPS FOR EVERY SERVICE

EMSCO Free-Circulation PROTECTORS ...are EASY to handle

They "stay put"—require limited space in the derrick and stack either on ends or sides. They are quicker—easier to handle.

EMSCO PROTECTORS score heavily, by actual comparison and test, over all other types.

The many distinct and vitally important EMSCO features "total up" to a degree of efficiency that justifies the tribute of "the outstanding engineering achievement in pipe protection."

Briefly summarized, a few of these features are:

Maximum Protection to drill pipe, casing, tool joints, and collars.

Four to 10 times longer life—due to exclusive design, especially treated materials, and unique method of locking on pipe.

Cannot snap off the pipe.

No restriction of circulation: circulation space is greater than volume of fluid forced through rotary hose.

Tough rubber bumpers cannot be seriously damaged by any slight cut or tear, as neither offsets nor rubber body embody any expansion strain, being made and cured flat.

Considerably lighter, yet much stronger than previous types.

Tighter, firmer grip on pipe; will not slip, pile nor overlap.

Insure dry pulling jobs; free circulation space prevents protectors pulling fluid out of hole when removed with string of drill pipe. Installed in 30 to 35 seconds, with light, simple tools.

Easily removable from pipe when pulled out.

Get the rest of this highly important story in our new illustrated folder.

They Stack Better On the Rig!

E. M. SMITH COMPANY

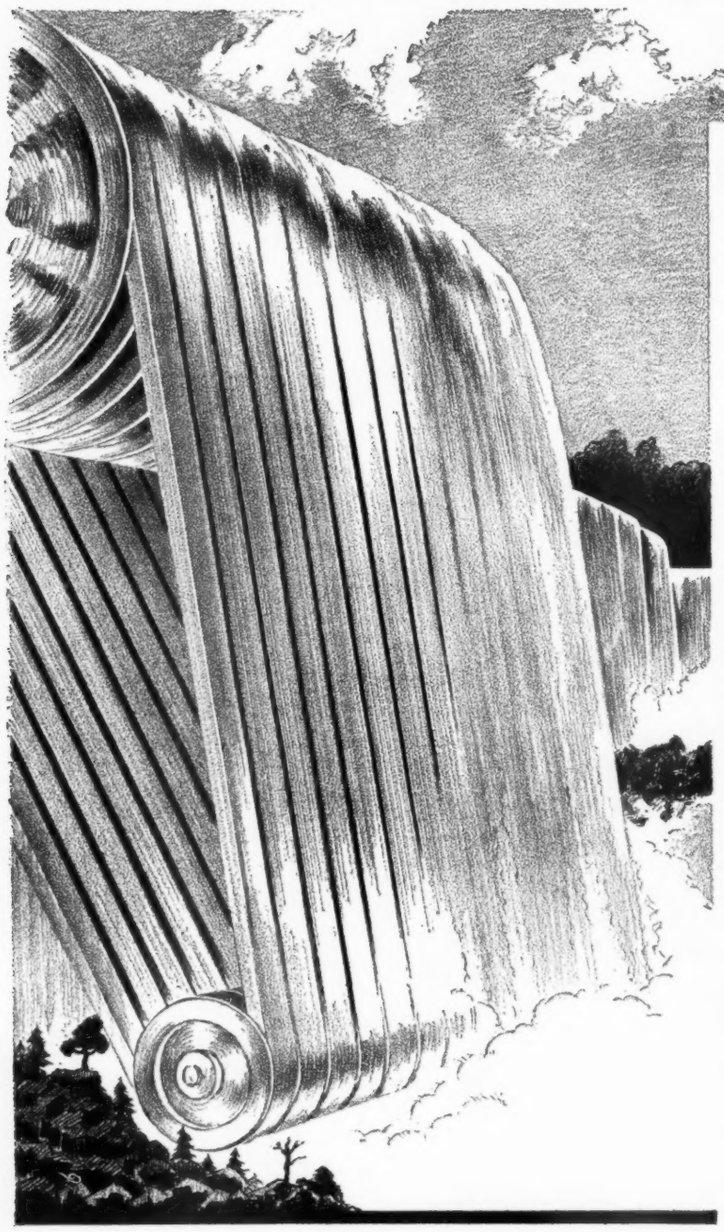
637 So. Clarence St. — **Los Angeles, Calif.**

Distributed by
THE CONTINENTAL SUPPLY COMPANY
General Offices: St. Louis

Distributed by
THE CONTINENTAL SUPPLY CO., Ltd.
224 Traders Building, Calgary, Alberta, Canada

Export Offices: CONTINENTAL EMSCO COMPANY, Inc., 74 Trinity Place, New York
London Offices: 316-17 Dashwood House, Old Broad St., E. C. 2

LIKE NIAGARA'S MIGHTY FLOW



POWER—smooth, unvarying, continuous as a steady waterfall. That's what Gilmer V-Belts will give on every make of single or multiple drive.

It's not by accident, not by chance, that the Gilmer V-Belt gives the utmost in efficiency and wear. It's because it's built that way.

Layer upon layer, the Gilmer V-Belt is moulded into the exact shape of the sheave. There is no guesswork as to size—no haphazard "rushing the job." Perfect fit—always—is the result.

Into the Gilmer V-Belt go 27 years of endless belt experience plus the finest materials money can buy.—It's built to stand strain, and more than that. *Because of its neutral axis—an original Gilmer feature, it is built to outperform and outwear any other V-Belt made.*

Try a set of Gilmer V-Belts *soon.* L. H. Gilmer Co., Tacony, Phila., Pa.

Note the extremely rugged construction of the Gilmer V-Belt. Note the layers of extra-strong cord placed at the neutral axis, an original Gilmer feature. Also the specially prepared rubber, and the sturdy canvas jacket which encloses the entire belt. This belt is scientifically built up in a mould the exact shape of a sheave so that perfect fit is certain These factors account for the great strength and efficiency of the Gilmer V-Belt

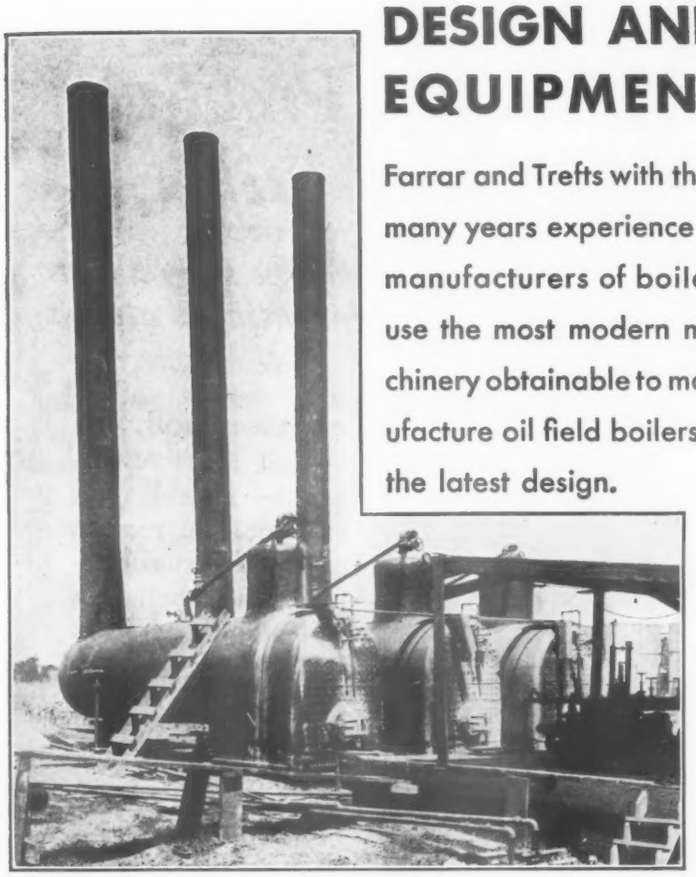
Gilmer

Makers of the World's Best Known V-Belts

ADVANCED • • •

DESIGN AND EQUIPMENT

Farrar and Trefts with their many years experience as manufacturers of boilers use the most modern machinery obtainable to manufacture oil field boilers of the latest design.



FARRAR & TREFTS *manufacturers of*

CONTINENTAL "CODE" BOILERS

"If Continental Sells It....There Is No Better" J723

THE CONTINENTAL SUPPLY COMPANY
General Offices: ST. LOUIS

THE CONTINENTAL SUPPLY CO., LTD.
224 Traders Building, Calgary, Alberta, Canada

Export Offices: CONTINENTAL EMSCO COMPANY, INC. 74 Trinity Pl. New York
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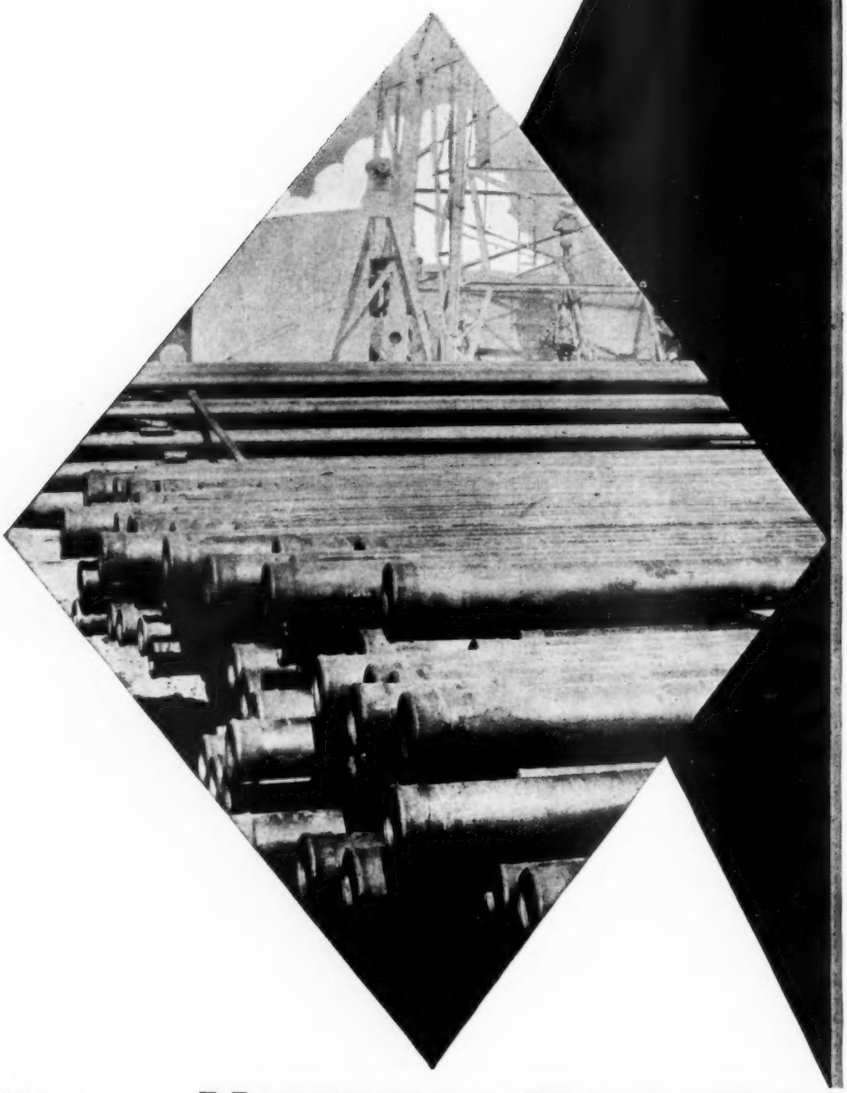
CONTINENTAL EMSCO S. A. R., 7, Strada Eminescu, Ploesti, Romania

CONTINENTAL

NATIONAL
A.P.I. DIAMOND BX & B8
CASING



Casing Problems Differ—

but the story about this casing is always the same

THROUGHOUT the oil fields of the world—whether you examine the records of famous wells or listen to the experiences of leading operators—the story about NATIONAL Casing, Diamond BX and B8, is always the same—*outstanding dependability!* Especially on the points of strength, uniformity, resistance to collapse, accuracy of threads and make-up of joints—you will find this universal recognition.

The exclusive use of NATIONAL Casing by successful operators is increasing every year. There's a reason. Experience has demonstrated the advantages of standardizing on NATIONAL—

America's Standard Casing

NATIONAL TUBE COMPANY

Frick Building, Pittsburgh, Pa.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

PRINCIPAL SUBSIDIARY MANUFACTURING COMPANIES OF UNITED STATES STEEL CORPORATION:

American Bridge Company
American Sheet and Tin Plate Company
American Steel and Wire Company
Carnegie Steel Company
Cyclone Fence Company
Federal Shipbuilding and Dry Dock Company
Illinois Steel Company
Minnesota Steel Company
National Tube Company
The Lorain Steel Company
Tennessee Coal, Iron & R. R. Company
Universal Atlas Cement Company

Pacific Coast Distributors–United States Steel Products Co., Columbia Department: San Francisco, Los Angeles, Portland, Seattle, Honolulu. *Export Distributors*–United States Steel Products Co., New York City

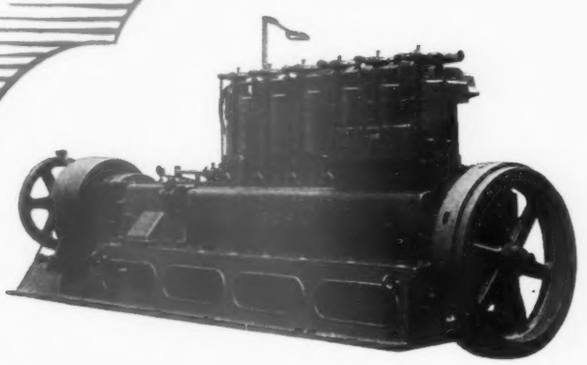
LOW FUEL COST

The Beauty of the **WRIGHT RELIABLE** *Gas-Gasoline Engine*

DRILLING POWER

at 2¢ an hour

Using Gas From His Own Lease



ONE enterprising Contractor* said of his WRIGHT RELIABLE: "We feel safe in saying that it will drill, pull tools, or do anything else as well as steam, and at only a fraction of the cost." He had used his WRIGHT on four wells with a 5,000-lb. string of tools and jars. Using Natural Gas from his own lease, his only expense, he reported, was 1 gallon of lubricating oil every 24 hours—a little over 2c an hour. Water expense was negligible. Using crews unfamiliar with gas drilling engines, he pronounced the WRIGHT "fool proof."

Using gasoline for fuel in the same engine, his fuel consumption was 45 gallons every 24 hours —a fuel cost of approximately 35c an hour. Sounds low? It is. But that's the way WRIGHT RELIABLE Drilling Engines operate!

*C. E. DAUGHERTY & CO.
Contractors and Producers
Owensboro, Kentucky.

Manufactured by

THE WRIGHT MACHINE CO., Inc.
Established 1880
OWENSBORO, KY.

Distributed in the Mid-Continent Field by the 15 stores of

THE BRIDGEPORT MACHINE CO.
WICHITA, KANS.

Backed by Bridgeport's
24-Hour Day and Night Service

A WRIGHT RELIABLE GAS-GASOLINE ENGINE ON YOUR WELL MEANS MONEY SAVED EVERY HOUR

CLIP THE COUPON FOR DESCRIPTION AND PRICES

The Wright Machine Co.
Owensboro,
Kentucky

Gentlemen: Please send me descriptive literature on your WRIGHT RELIABLE gas-gasoline engines. I understand this does not obligate me in any way.

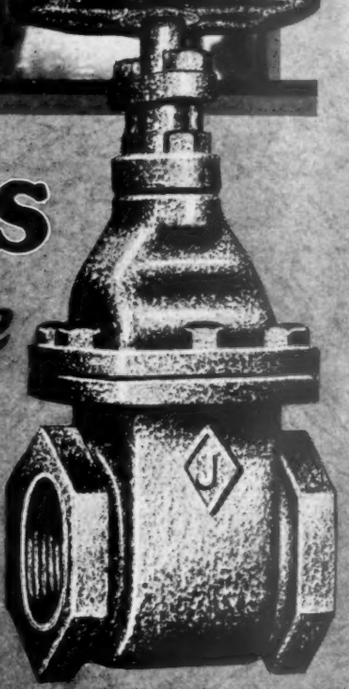
Name .....

Company .....

St. No. .....

City ..... State .....

Jarecki Valves
for Exacting Service



There are four reasons why, when conditions are severe and leak-prevention essential, it is a safe procedure to see to it that your valves carry the JARECKI Diamond "J."

1—The line is complete. There is a style and size for all needs.
2—The design is based on 78 years of successful experience.
3—Each valve is tested under actual pressure and inspected to insure uniform dependability.
4—Only analysis-proved metals, with a large margin of safety over working pressure ratings, are used.

The JARECKI store in your neighborhood carries a comprehensive line and is ready to meet your every need.

Jarecki
MANUFACTURING COMPANY

General Office—St. Louis, Mo. Home Office and Factory—Erie, Pa., U. S. A.

Branch Stores at all important places in the Oil Country.

District Offices { Pittsburgh, Pa.; El Dorado, Kan.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.

"Gotta have 'em, eh? Wow! $1,200 for a string of Fishing Tools---and this time next week we won't have any more use for them. Hate to think what Mac's gonna say."

"Wait a minute, Gloomy. Didn't you ever RENT tools from Bridgeport? We're not far from a Bridgeport Store---they've got one in every oil field. They'll rent us anything we want. And Brother, they get 'em to you quick, too. Let's do some phoning."

YOU'RE NEVER FAR FROM BRIDGEPORT RENTAL SERVICE — *Just "do some phoning" when you need Rental tools!!*

Rent Tools and Save Money

GET 'EM QUICK through the WORLD'S LARGEST FULL LINE RENTAL CONCERN

14 BRANCH STORES throughout the Mid-Continent Fields

Full Line of CABLE OR ROTARY DRILLING and FISHING TOOLS

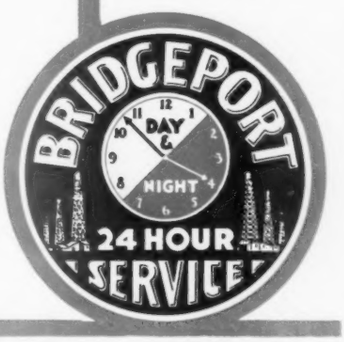
PHONE OR WIRE BRIDGEPORT COLLECT

Pay Rental ONLY ON TIME TOOLS ARE ACTUALLY IN YOUR POSSESSION

24 HOUR SERVICE 365 Days a Year

MAKE A NOTE OF THE BRIDGEPORT BRANCH NEAREST YOU

El Dorado, Kansas
Hugoton, Kansas
Russell, Kansas
McPherson, Kansas
Ranger, Texas
Pampa, Texas
Odessa, Texas
Breckenridge, Texas
New Hobbs, N. M.
Marietta, Ohio
Okla. City, Okla.
Seminole, Okla.
Tulsa, Okla.
Maude, Okla.

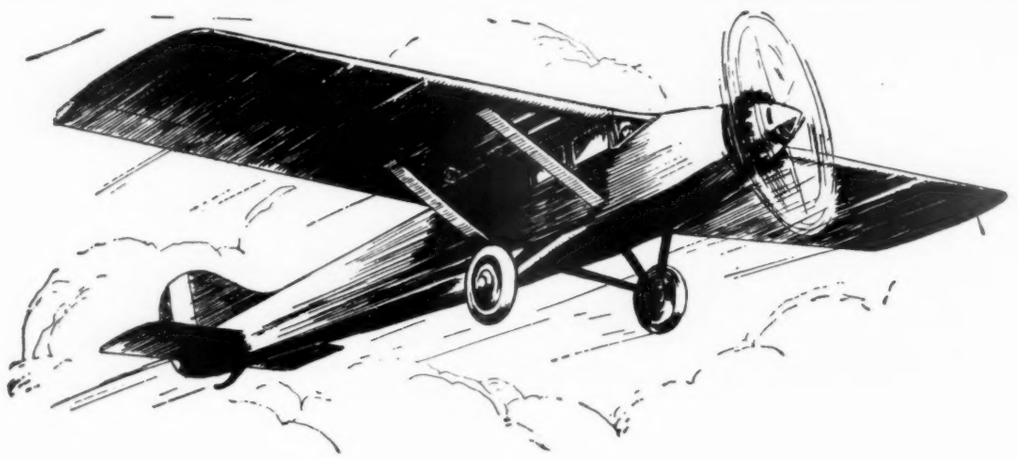


BRIDGEPORT MACHINE COMPANY

WICHITA KANSAS

MONARCH OF THE PLAINS

BRANCHES THROUGHOUT THE OIL FIELDS



From Covered Wagon Days To Airplane Ways

Founded in the days when covered wagons still traversed the Texas prairies . . . . proving a bulwark of stability during the frenzied financial crises of the '70s . . . . lending a helping hand to the development and prosperity of the entire Southwest, the policy of the Houston National Bank has ever been one of progress, tempered with a sensible conservatism.

The Houston National has kept pace with each generation . . . . with each change of business procedure . . . . without losing sight of its obligation to its depositors and its clients.

And today, in this air-minded age, the Houston National offers a financial experience that acts as a beacon light which safely guides to progress ahead.

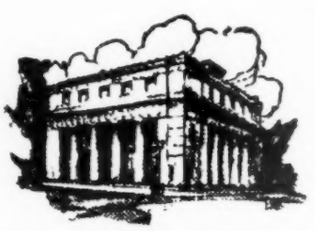
To both the individual and the corporation this bank can act as the prognosticator of the inevitable change which comes to every community. Our resources of information, touching every phase of business, activity, are yours . . . . In short, we offer you intelligent and constructive guidance in adjusting your plans to a progressive age. Our executives will be pleased to discuss your problems in strictest confidence and without obligation.

Sam Houston

At nine each Monday evening from the Radio Studios of KPRC at Houston, the Houston National Bank presents the Houston National Players in dramatic sketches based on the life of Sam Houston, one of the Southwest's finest and best-known radio programs. Tune in!

HOUSTON NATIONAL BANK

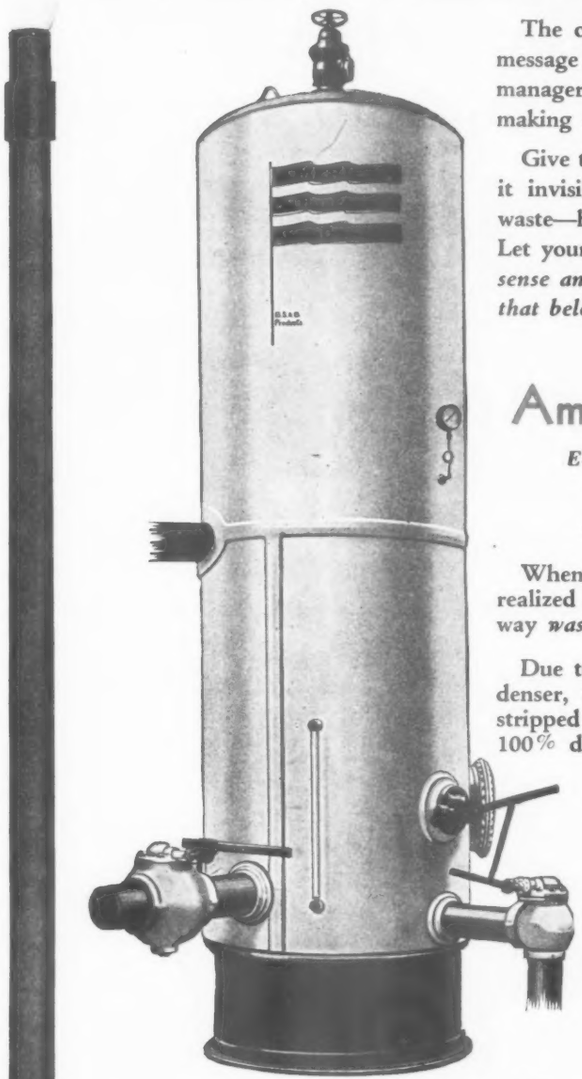
Main at Franklin



What Does the Gas Vent Say?

WASTE?

A "Smoky" Vent Means Dollars Thrown Away



The oil industry is striving to eliminate waste, so this message will strike a happy keynote for those production managers and engineers who realize that saving means the making of extra money without additional effort.

Give thought and a look to your vent. Is it smoky or is it invisible? If that exhaust resembles smoke, there is waste—hundreds of barrels of oil spraying the atmosphere. Let your vent be merely a release for the gas *and in no sense an atomizer throwing off millions of globules of oil that belong to you!*

The Improved
American Oil and Gas Separator

Equipped with the B. S. & B. Spray Condenser

Assures 100% Dry Gas

When the engineers designed this improved model they realized that separating the gas from the oil in the usual way *was not sufficient.*

Due to the construction of the B. S. & B. Spray Condenser, the oil remaining in the wet gas is completely stripped out and when the gas leaves the Separator, it is 100% dry and you have gained all that extra crude.

The float is oversize—man size—and is on the inside. It has the capacity of ten of the outside floats. It is entirely automatic—you are assured perfect control of the oil level.

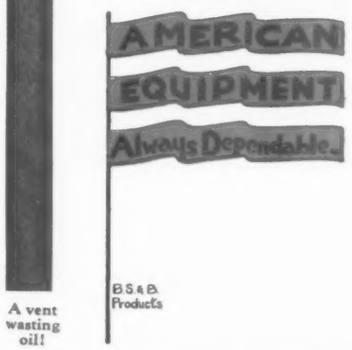
These Separators, made in different sizes, to handle varying volumes, pressures and sand conditions, have been built for a purpose and serve that purpose to the full advantage to the owner, saving money whenever operated.

Let us tell you more about these Separators or show them in the field in action! May we send a representative, or our literature? Please address Dept. AA-4.

"See American First"

American Tank & Equipment Corp.

A SUBSIDIARY OF
BLACK-SIVALLS & BRYSON, Inc., Bartlesville, Okla.
OKLAHOMA CITY — OKLAHOMA

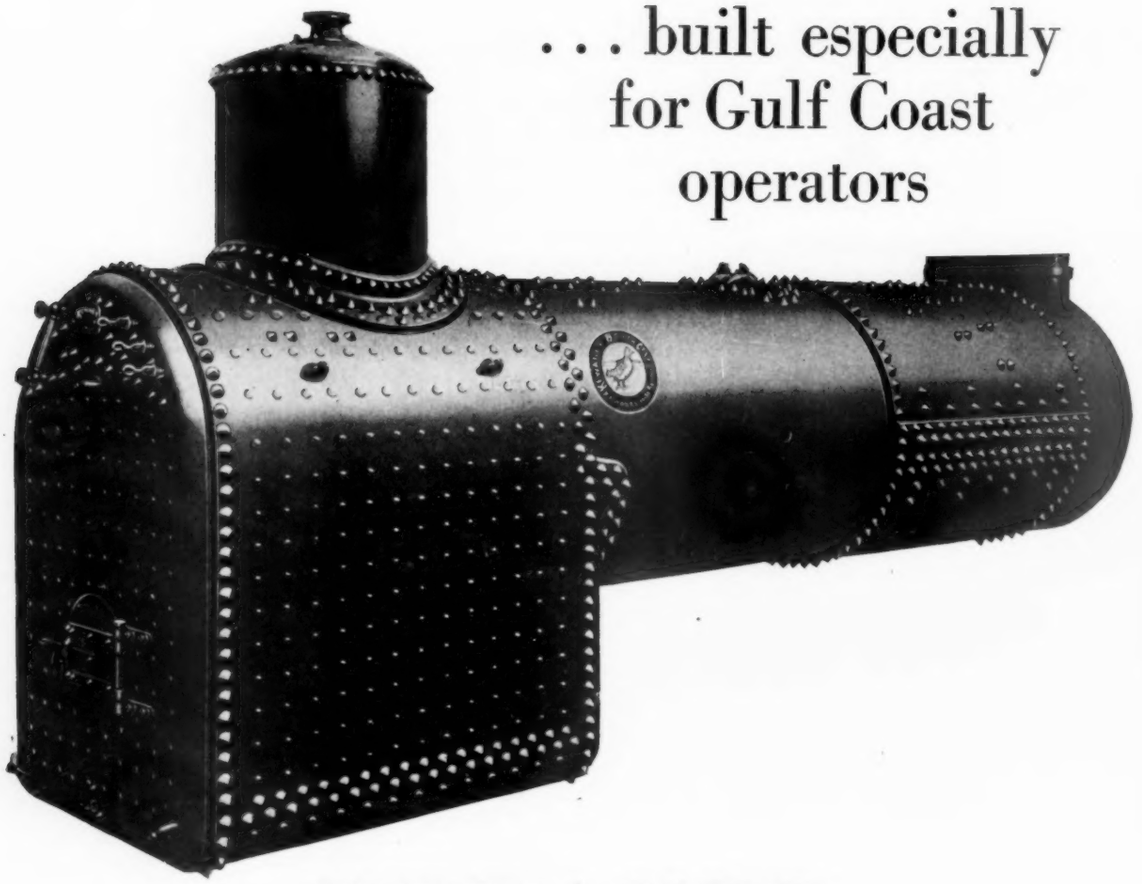


A vent wasting oil!

A vent without waste!

Here's A Boiler...

. . . built especially for Gulf Coast operators



KEWANEE

100 h.p. - 250 lb. *working pressure*

Behind its manufacture are all the proven principles of boiler construction, that have won such renown for Kewanee Boilers.

Distributed Exclusively on the Gulf Coast by:

Wilson SUPPLY COMPANY

Oil & Gas Well SUPPLIES

BRANCH STORES
Luling, Beaumont, Pettus,
Barbers Hill, Texas
Shreveport, La.

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"For every joint on every line"

Victaulic Couplings are specified when overground pipe lines must stand high pressures and wide temperature variations. Unanchored or buried—no type of joint can be made faster or more economically. No line is less affected by contraction, expansion or varying pressure.

• • •

Available for steel, wrought iron, cast iron and spiral weld pipe—all sizes from ¾" up—for all working pressures. See Sweet's Page 451. Mail the coupon below.

VICTAULIC COMPANY OF AMERICA
26 Broadway New York

"For every joint on every line"

FLEXIBLE LEAK-PROOF

VICTAULIC

REG. U.S. PAT. OFF.

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FOR OIL, GAS, WATER, SEWAGE, COMPRESSED AIR, ETC.

COUPON
For uses, installations, specifications and prices, fill in and mail this coupon.

VICTAULIC COMPANY OF AMERICA
26 Broadway New York

Please send me VICTAULIC BULLETIN No. 8

Name.....

Address.....

SKILLED SUPERVISION GUARANTEES THE QUALITY OF GULF PRODUCTS

COASTAL AND PARAFFINE CRUDES
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NAPHTHA—GAS—OILS
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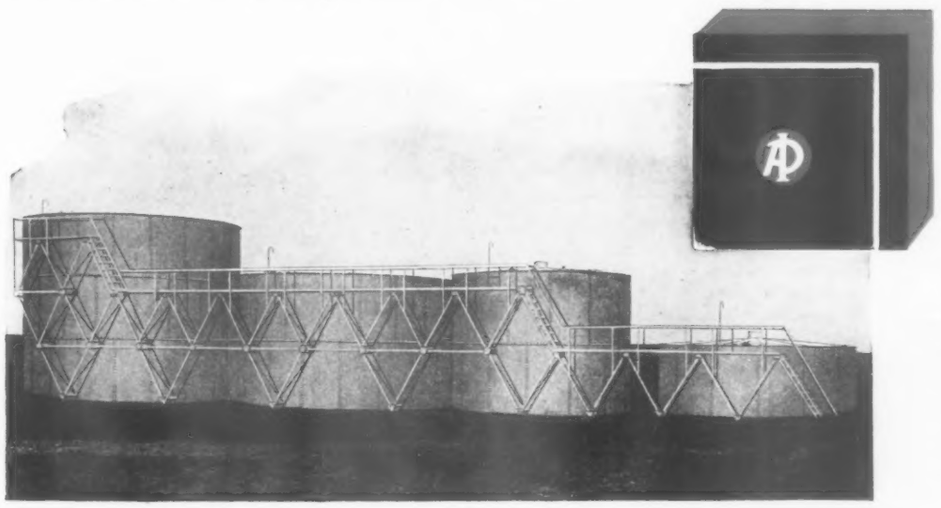
AND NOW

COLUMBIAN

presents an adjustable and interchangeable Stair and Runway of unit construction adaptable for tanks of any height or size... After offering to the Oil Industry the A. P. I. Bolted Tank, the patented leakproof Recess Nut, and a new Combination Thiefhole, the debut of this new Stair and Runway again proves COLUMBIAN'S keeping pace in the world's greatest industry. . .



Inquiries are solicited on Bolted Tanks, Floating Decks, Adjustable Stair and Runways, Pipe Line Casings, Metal Buildings, etc.
Immediate shipment assured from factory direct or from stocks at any of our distributors listed below.

COLUMBIAN STEEL TANK COMPANY

EST'D 1894

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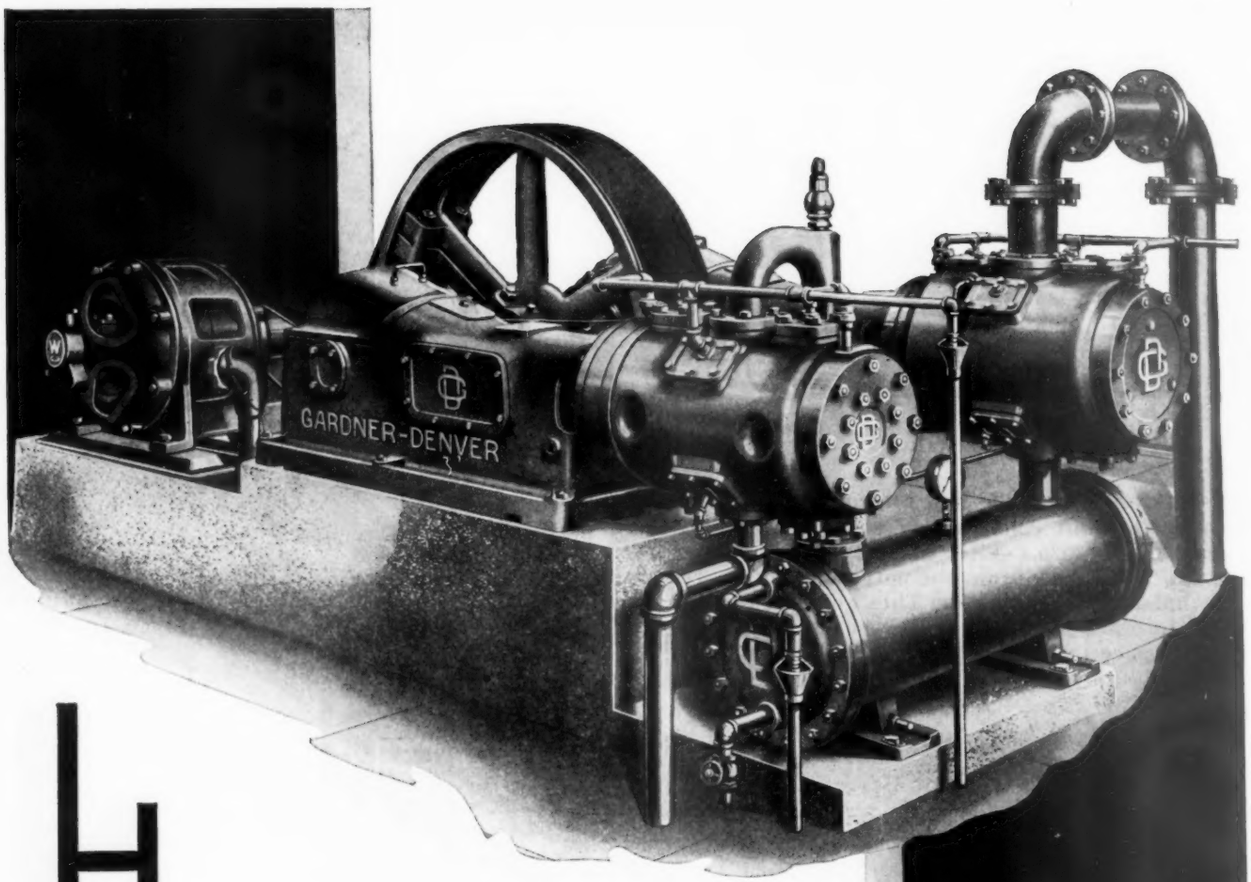

HIGH PRESSURE BLOWING COMPRESSOR for AIR GAS LIFT SERVICE

ROLLER MAIN BEARINGS

▼

1200 LBS. STARTING PRESSURE

GARDNER-DENVER COMPANY
QUINCY, ILLINOIS

Oil Field Branches in all Principal Cities

J702

GARDNER-DENVER

OVERSIZE

BETTIS PROTECTORS *for*

HEAVIER deep drilling

FULLY PATENTED

Modern deep drilling has introduced longer runs of larger casing, but with approximately the same diameter drill string. The greater clearances between casing and string present opportunities for severe whipping and abuse. But the new *Oversize Bettis Protector*, with its greater surface area and thicker all-rubber wall, cushions these heavier blows and tendencies toward vibration. Correct circulation areas are maintained. Like the standard Bettis Protectors and Drill Stabilizers, this new Oversize Protector is a big ring of the toughest rubber known. No knobs, metal, pins or other gadgets are used.

The oversize Bettis Protector is slipped onto the drill pipe without special tools. Easily manipulated below the surface with the overshot in case of twist-offs.

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Carried in stock at Los Angeles, Ventura, Kettleman Hills, Bakersfield, Coalinga and Long Beach, California. Tulsa and Oklahoma City, Okla. Houston, Texas. Hobbs, New Mexico. Calgary, Alberta, Canada. New York City.

"Best bet yet"

Crown *and* Traveling Blocks *for* Dependable Drilling *and* Pumping

Two of the most important requirements in oil field block equipment are (1) frictionless sheave operation and (2) permanent sheave rigidity under all operating stresses.

Having made up their minds not to be satisfied with anything short of the uttermost efficiency regarding these qualities, The Beaumont Iron Works Company, Beaumont, Texas, adopted Timken Bearings for their "Dreadnaught" crown and traveling blocks in 1926.

The results, both from the viewpoint of themselves and their customers, have been all that could be desired.

As told in the manufacturer's own words: "Since the first part of July, 1926, when the first Dreadnaught Timken Roller Bearing Traveling Block was sold, we have had to replace only one Timken Bearing. This bearing was broken when the traveling block fell from the top of the derrick on the rotary, which fall was caused by a blowout. The first block, and others sold about the same time, have been in practically continuous service since they were sold. This speaks well, not only for Timken Bearings, but for the entire block."

Modern anti-friction requirements in all types of oil field machinery, including full radial thrust capacity, are met with similar convincing performance by the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken-made steel. The Timken Roller Bearing Co., Canton, Ohio.

TIMKEN *Tapered Roller* **BEARINGS**

The "B-2" Drilling Bit and Model "M" Rock Bit Drill STRAIGHT

Swift and Sure!

Note the little cone-like formation extending upward within the "B-2" Bit illustrated above. This acts as a guide, holding the bit straight to vertical course.

Globe-made Bits bite their way through **any** formation—straight as a plumb-line—incredibly swift—infallibly sure!

The secret of our "B-2" Bit's super-speed and ease of operation, lies in a unique construction of the multiple teeth. These are so arranged in graduated serrations, that only a small "nibble" is first made by the bit, cutting the circumference of the core. With the core separated from the surrounding solid earth, it then yields readily to removal; and each succeeding row of teeth slices away its portion of the core.

Simple!—yet marvelously effective—unbeatable for all-around drilling efficiency!

Model "M" Rock Bit and 3-Point Reamer

THE same straight-to-the-line accuracy of drilling—the same sturdy strength and reliable, speedy work that distinguish the "B-2" Bit, are conspicuous features of the Model "M" Rock Bit.

This efficient tool has extra large cutting surface area, the cutter diameter averaging one-third the width of the hole, accommodating increased size of diameter pins.

The 3-point or double 3-point Reamers have much greater cutting surface area than the ordinary 3-point or double 3-point type.

Records made by these bits under severe tests will interest you. A postal will bring them, together with full descriptive literature. Write today.

GLOBE OIL TOOLS CO.

LOS NIETOS, CALIFORNIA

H. C. Smith Manufacturing Co., Inc.
Ventura, Calif.
Bakersfield, Calif.

Successors to
Wieman-Kammerer-Wright Co., Inc.
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for INDUSTRIAL and GENERAL HOUSING PURPOSES
HOUSTON READY-CUT HOUSE COMPANY HOUSTON TEXAS
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Write for it today

This catalog of ours has pictures and plans of hundreds of buildings required by the Oil Industry. You should have a copy on your desk. A note from you will bring one.

In it you will find all types of buildings, from Meter and Tool Houses to large, substantial Warehouses. All are made of the highest grade materials, and carefully constructed by skilled workers under the most modern methods.

The durability of Houston Ready-Cut Buildings, makes them most economical. Write for the catalog and learn how to reduce your housing costs.

HOUSTON READY-CUT HOUSE CO.

Successors to CRAIN READY-CUT HOUSE CO.

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BADGETT LUBRICATOR SAVES SIX WAYS

1. TIME
2. TROUBLE
3. SHUT - DOWNS
4. DELAYS
5. ENGINE WEAR
6. And MONEY

Badgett Lubricators operate on every type of steam engine. Get Badgett Equipment now and end all your lubrication troubles. Good lubrication means money to you, the life of your machinery, the time of your workmen. Badgett Lubricators eliminate packing piston rods on engines and pumps.

This lubricator is a positive, regular feed; can be attached to any steam line; sits upright; may be attached at bottom or both ends; operated by water pressure. Here are some present users of Badgett Lubricators:

Southern Drilling Co., Oklahoma City, Okla.
John Mabee, Tulsa
Loffland Bros., Tulsa
J. Henry, Duncan, Okla.
Summit Drilling Co., Tulsa
G. J. Beard, Duncan, Okla.
Hubbard & Woffard, Tulsa
Herman Wagner, Okla. City
Byers Drilling Co., Okla. City
A & B Drilling Co., Okla. City
Capitol Drilling Co., Okla. City
Prince & Prince, Electra, Tex.
Clark & Cowden, Duncan, Okla.
Hartman & Hamilton, Seminole, Okla.
Independent Oil Co., Okla. City
G. E. Gilberth, Okla. City
Golden & Cochran, Wink, Texas.
Haynes Drilling Co., Wink, Texas.
Murphy & Graham, Seminole, Okla.
Steinberg & Yerkee, Seminole, Okla.
Fain McGaha, Wichita Falls, Texas
Alleson & Clevinger, Seminole, Okla.
Winkler & McQueen, Duncan, Okla.
Reynold Drilling Co., Seminole, Okla.
Manahan Drilling Co., Seminole, Okla.
Herndon Drilling Co., Seminole, Okla.

Remember, that our lubricators are sold through leading supply houses in the Mid-Continent and National Supply Company, in California.

You are not obligating yourself when you write for details.

Badgett Steam Lubricator Co.

CHICKASHA, OKLAHOMA

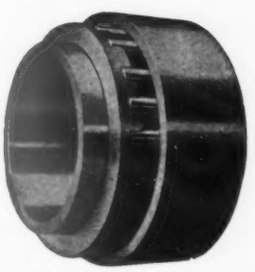
The FRANKLIN Clutch

—new and improved and AMERICAN-ized

which means it has been prepared for

HEAVY DUTY

with



The Standardized Heavy Duty Bearing of the Oil Industry

HARD-BOILED—that's what American Bearings are. And there's no mistake about that. For the tough stuff they are what old-fashioned folk call "the berries." Franklin is one among seventeen manufacturers of Heavy Duty oil field drilling equipment who have given these bearings all the tests they know, and ended up satisfied that they can't equip their products with any bearing that is better—or as good.

AMERICAN ROLLER BEARING CO.
PITTSBURGH, PENNA.

Frank M. Cobbledick Co.
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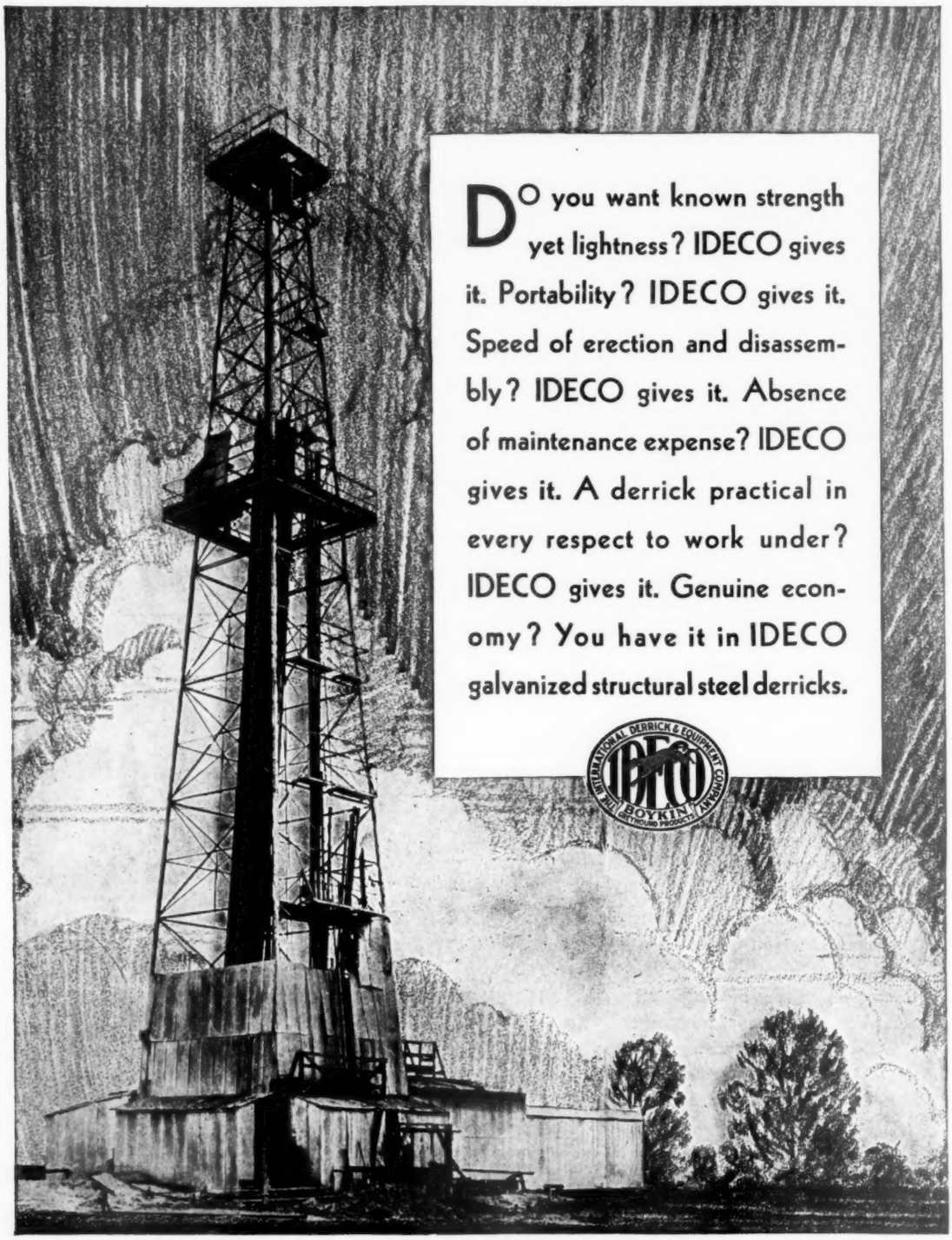
Edward D. Maltby Co.,
321 W. Pico St., Los Angeles

AMERICAN HEAVY DUTY ROLLER BEARINGS

IDECO

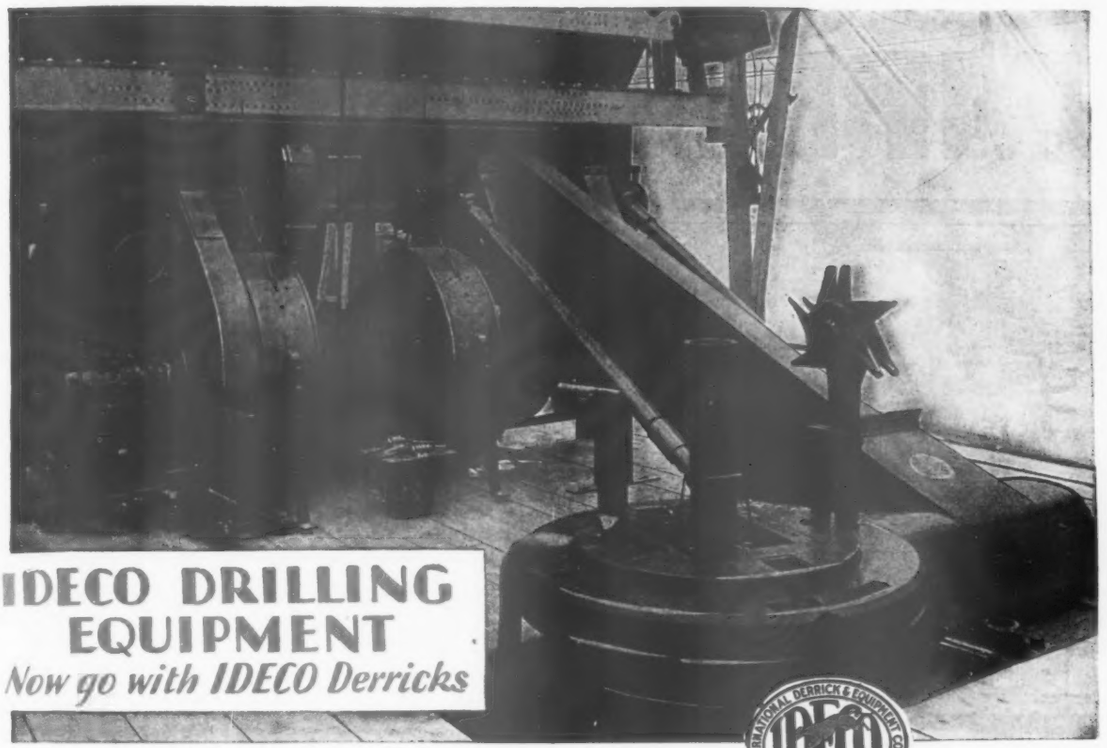

DO you want known strength yet lightness? IDECO gives it. Portability? IDECO gives it. Speed of erection and disassembly? IDECO gives it. Absence of maintenance expense? IDECO gives it. A derrick practical in every respect to work under? IDECO gives it. Genuine economy? You have it in IDECO galvanized structural steel derricks.
IDECO
BOYKIN

The International Derrick & Equipment Company

New York Wichita Tulsa Houston Shreveport Ft. Worth Beaumont Denver Maracaibo, Venezuela

IDECO

BOYKIN ROTARY EQUIPMENT



The IDECO Boykin Greyhound line of Rotary drilling equipment affords the producer exactly what he needs to complete his IDECO Derrick. A Rotary Draw Works with all manner of strength, simplicity and efficiency. A new 27-inch Make and Break Rotary equipped with roller bearings and affording greater speed, smoother operation and complete control. Straight Line Roller Bearing Crown and Traveling Blocks, faster, carrying more weight and easier on the lines.

These products and many others of IDECO are fitting mates to the superb towers above. They insure the permanence of your investment on one location or many.

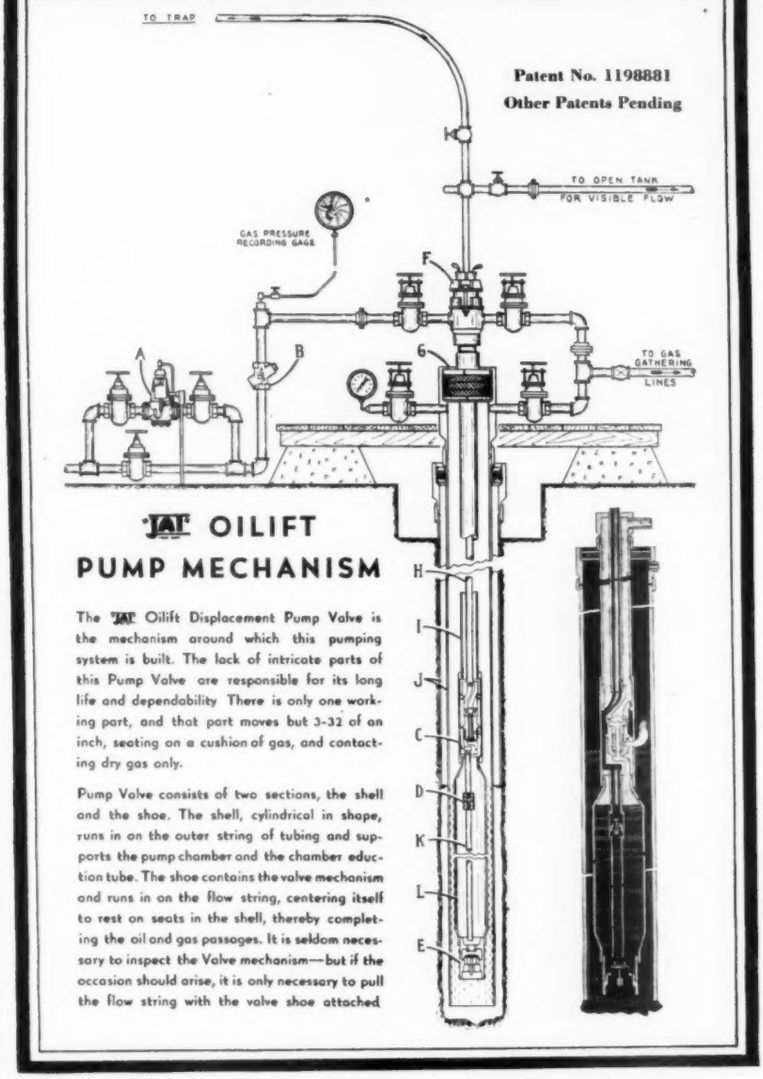
IDECO-BOYKIN PRODUCTS

Derricks	Reduction Gear Units
Bull Wheels	Chain Driven Rigs
Calf Wheels	Machinery Supports
Band Wheels	Tubing Hoists
Counter Balances	Rotaries
Walking Beams	Countershafts
Pitmans	Traveling Blocks
Sand Reels	Crown Blocks
Draw Works	Tubing Catchers
Draw Work Braces	Standard Steel Buildings

Columbus, Ohio Beaumont, Texas, Los Angeles, Cal.

Branches in every important oil field

"JAT" PUMPING SYSTEM



"JAT" OILIFT PUMP MECHANISM

The "JAT" Oilift Displacement Pump Valve is the mechanism around which this pumping system is built. The lack of intricate parts of this Pump Valve are responsible for its long life and dependability. There is only one working part, and that part moves but 3-32 of an inch, seating on a cushion of gas, and contacting dry gas only.

Pump Valve consists of two sections, the shell and the shoe. The shell, cylindrical in shape, runs in on the outer string of tubing and supports the pump chamber and the chamber eduction tube. The shoe contains the valve mechanism and runs in on the flow string, centering itself to rest on seats in the shell, thereby completing the oil and gas passages. It is seldom necessary to inspect the Valve mechanism—but if the occasion should arise, it is only necessary to pull the flow string with the valve shoe attached.

ADVANTAGES

Will pump wells of any depth—crooked or straight.

Low lifting cost.

Increased production—due to continuous operation.

Not effected by sand.

Additional gasoline recovery from recycled gas.

Eliminates frequent pulling of wells.

Can pull vacuum or hold pressure on formation when the need arises.

Permanence of compressor plants assured.

Sucker rods and standard pumping equipment eliminated.

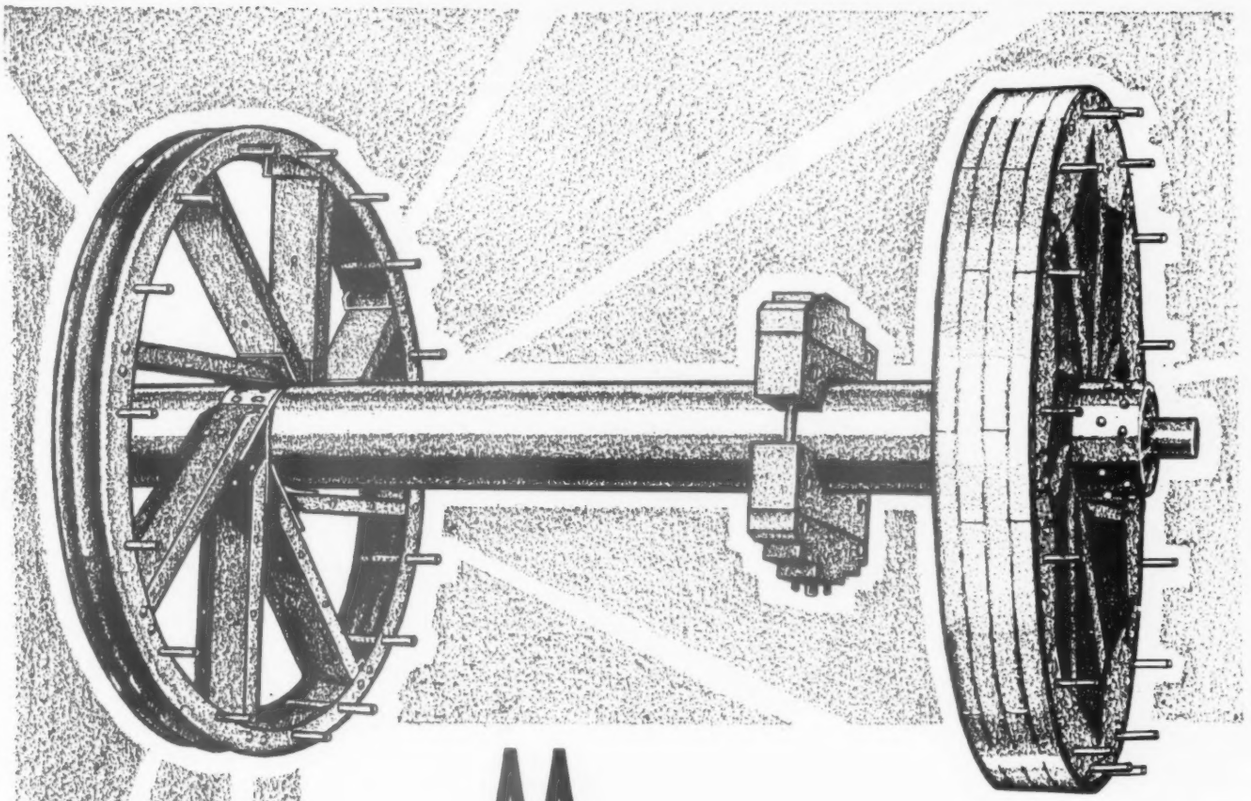
No wear on tubing or casing.

Descriptive Bulletin

No. 90

Sent on Request

THE NATIONAL SUPPLY COMPANIES



Moore BULL WHEEL

AS GOOD AS THE CHAMPION DERRICK

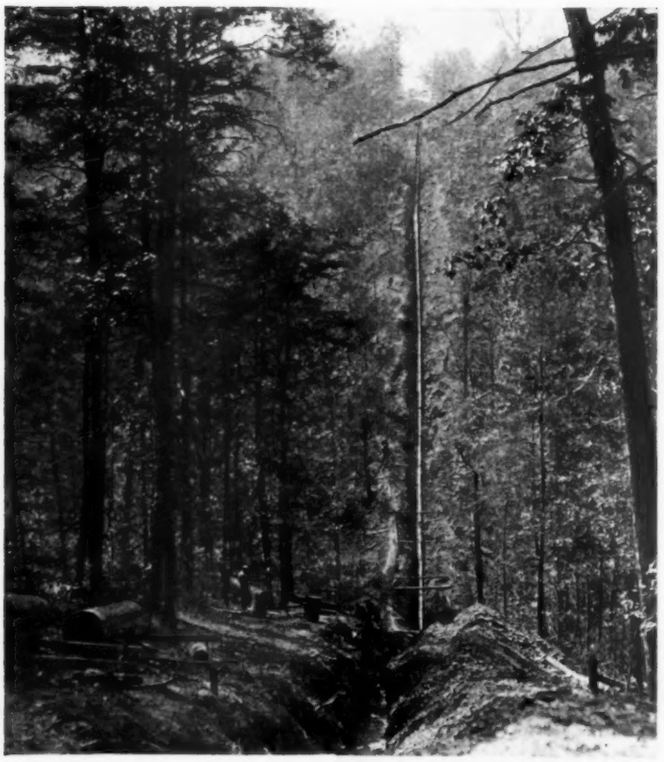
The ruggedness and long life of the Moore Steel Bull Wheel are the results of extra strength supplied at every point of wear and strain. The heavy shaft is heated and shrunk over the gudgeons. The latter are securely riveted in place. The spokes are tangent to the shaft and exert a direct push on it. To give maximum pulling power, the tug rim is of one piece rolled steel with a double V groove. The Moore Bull Wheel conforms to A. P. I. dimensional standards and is field proven equipment.

Moore

ALL STEEL RIG EQUIPMENT

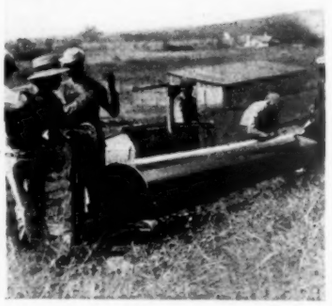
LEE C. MOORE AND COMPANY, INC.
PITTSBURGH Established 1907 TULSA
New York Offices: Oilfield Equipment Company, 30 Church Street, New York, N. Y.
DALLAS, TEXAS WICHITA, KANSAS CASPER, WYO.
SHREVEPORT, LA. HOUSTON, TEXAS
Stocks in All Principal Fields

There's a *Barrett Specification*



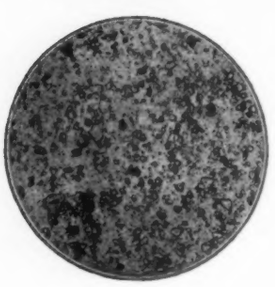
Above is shown a section of the Southern Natural Gas Corporation pipe line, protected with Barrett Anti-Corrosion Products and Specifications.

Picture at right illustrates revolving pipe method of applying Barrett Pipe Line Enamel.



For pipe of large diameter The Barrett Company will furnish equipment required to revolve pipe and spread enamel.

This photo-micrograph shows how flakes of the internal reenforcement used by Barrett in enamels tend to interlock. They laminate with the waterproofing agent and give Barrett Pipe Line Enamel unusual tensile strength and toughness.



And here is a photo-micrograph showing how ordinary filler, the granular or dust type, looks. It is composed of tiny smoothly-surfaced particles in loose contact.

PIPE LINE ENAMEL

for every soil and climatic condition . . .

THE Barrett Company manufactures standard enamels with varying melting points and consistencies to meet each particular soil and climatic condition as no one enamel can be supplied as a "cure-all" for all corrosive conditions.

When you choose Barrett pipe-line protection, our engineering and research departments cooperate with you to help solve—*before* the remedy is applied—such problems as:

Topographical conditions; types of soil the line is to run through; season of year and weather conditions under which enamel will be applied; the various ground temperatures; working temperature of gas, oil or water to be transmitted; depth of ditch; type of construction, whether welded or coupled; conditions met in crossing swamps, rivers, gulleys; type of water, whether acid, alkali or salt; hydrostatic pressure along each section, etc.

Based on the correct answers to these questions —and *76* years' of experience in waterproofing and weatherproofing buildings, dams, etc.—we recommend the proper specifications of enamels and primers to be used. Barrett Service Field Inspection also supplied. Further details on request.

BARRETT SPECIFICATION ANTI-CORROSION PRODUCTS

. . . include felt reenforced enamels for extreme conditions—rivers, swamps, etc., enamels to be applied hot in less corrosive soils; cold applications for still less corrosive locations.

The *Barrett* Company

40 Rector Street, New York, N. Y.

ALUMINUM

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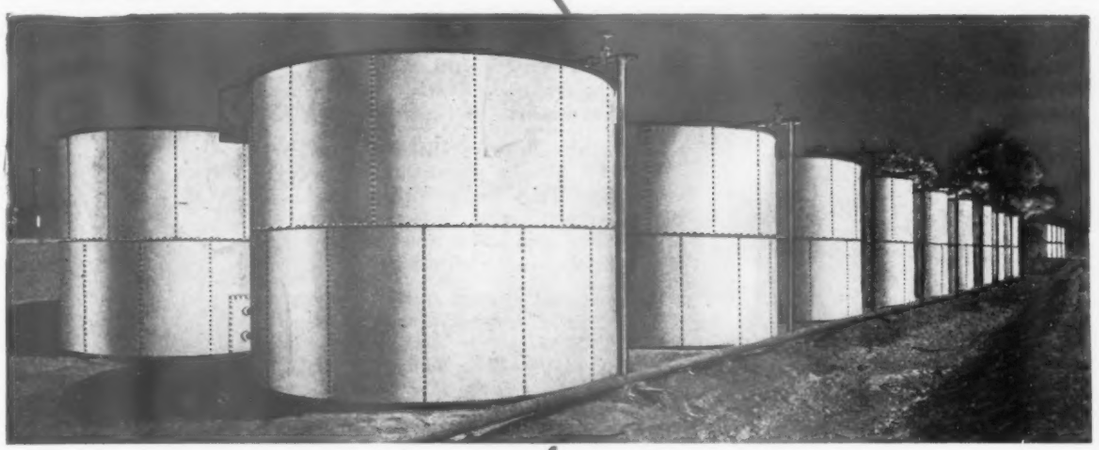

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The OIL WEEKLY

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SPENCER W. ROBINSON, EDITOR

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R. L. DUDLEY, *President*
A. L. BURNS, *Gen'l Manager*
SPENCER W. ROBINSON, *Editorial Director*
J. KENT RIDLEY, *Managing Editor*

NEW YORK: Room 613, 250 Park Avenue, Dick Swinsky, Manager.

PITTSBURGH: 703 Park Bldg., W. W. Pigue, Manager.

CHICAGO: 624 So. Michigan Ave., O. R. Waller, Manager.

LOS ANGELES: 416-417 Haas Bldg., W. E. Green, Manager.

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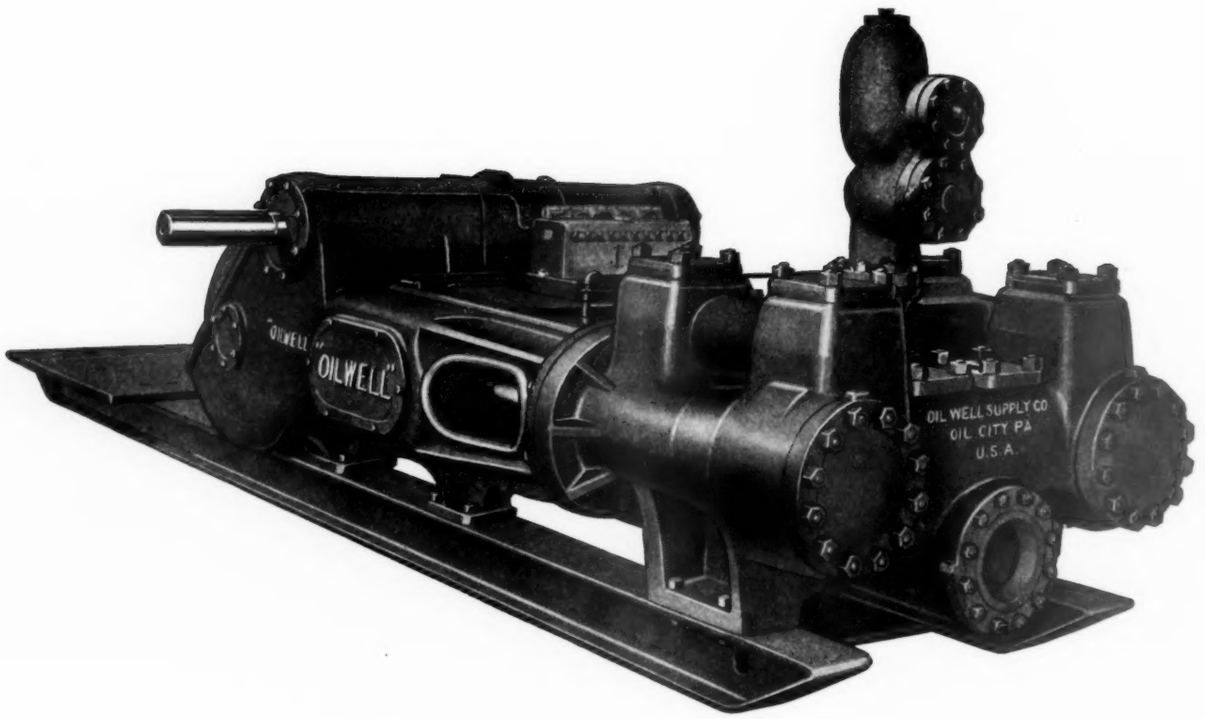

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The OIL WEEKLY

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Texas Production Curb Assures Early Stabilization

By H. J. STRUTH
Staff Economist

ORDERS to bring Texas crude production down to a daily average of about 750,000 barrels for a period of 90 days beginning with August 27, marked a decisive stroke in the battle against over-production. The backing of the Texas Railroad Commission, supporting the unanimous desire on the part of Texas operators to bring production down to a sane level, assures a further decline in the national crude production curve and imparts a decidedly more optimistic tone to the immediate outlook. With the prospect of a definite curtailment schedule in Texas, there is now every assurance that the industry will realize stabilization at an early date.

The curtailment order sisued by the Texas Railroad Commission on August 14, carries out the proposed proration placed before the commission by the Committee of Producers and Pipe Lines of Texas by Robert R. Penn, chairman. All producing areas of the state are expected to curtail production according to the limitations previously outlined, with the exception of Southwest and West Texas and the Gulf Coast. A further hearing will be held at Austin at an early date, at which time proration schedules for the latter areas will be definitely drawn up.

The order stressed the fact that its authority to deal with the subject of the conservation of the natural resources of the state is derived from the constitution of Texas, wherein it is made incumbent upon the legislature to pass laws appropriate to the conservation and development of natural resources. It was stated also, however, that it is not the function of the rialroad commission to act as economic dictator to the petroleum industry, its powers being vested only in the interests of the people of state to prevent economic waste of petroleum. Admission is also made therein that Texas is the chief menace to the balancing of supply and demand of the petroleum industry of the United States. The following quotation emphasizes this fact: "Generally speaking, outside of Texas the oil industry and regulatory bodies have taken steps toward the conservation of oil in its natural reservoirs. In the principal oil producing states of this country, oil wells and oil fields have been prorated through cooperation on the part of the industry or through the mandates of governmental units, so that the supply of oil taken from the earth may be adjusted to the demand for consumption, and thereby waste eliminated. The existing and threatened over-production in Texas is the chief menace to the balancing of supply and demand, and the principal threat that our natural resource will be wasted through continued storage in its crude state."

The railroad commission order gives notice that a hearing will be held on August 25, at Austin, to determine the reasonableness of the proration order for the various fields. Except for such modifications as may be made at that time, the order as outlined will become effective at 7 a. m. on August 27, limiting the production of Texas to a maximum of 750,000 barrels daily.

The order further states that on a day in November, to be later determined, there will be held a hearing at Austin to determine whether or not the proration order shall be terminated at the expiration of the 90-day period, or whether it shall be modified and continued, or continued in all of its then terms.

Reductions Contemplated

As the situation exists under present plans, the following reductions are contemplated within the major producing sections of the state:

Major Sections	Production Limit	Actual Production Aug. 9, 1930	Reduction
Panhandle	80,000	97,650	17,650
North Texas	69,000	72,900	3,900
West Central Texas	52,000	53,450	1,450
West Texas	276,350	290,700	14,350
East Central Texas	41,850	39,400	...
Southwest Texas	67,150	89,350	22,200
Coastal Texas	150,500	176,400	25,900
Total	736,850	819,850	83,000

A late check of production by individual fields indicates that the following approximate reductions will be made in the fields that are directly affected by the railroad commission's order:

Field	Approximate Daily Reduction	Field	Daily Approximate Reduction
Carson County	1,500	Crane-Upton	13,000
Gray County	11,000	Darst Creek	5,000
Hutchinson County	3,500	Laredo	2,000
Archer County	1,400	Salt Flat	4,000
Electra	1,000	Barbers Hill	8,000
Wilbarger	3,000	Humble	7,500
Young County	3,500	Refugio	10,000
Yates and Pecos Counties	9,000	Raccoon Bend	4,500
		Sugar Land	4,500

(Continued on page 50)

Two Great Producing Horizons In Southwest Texas

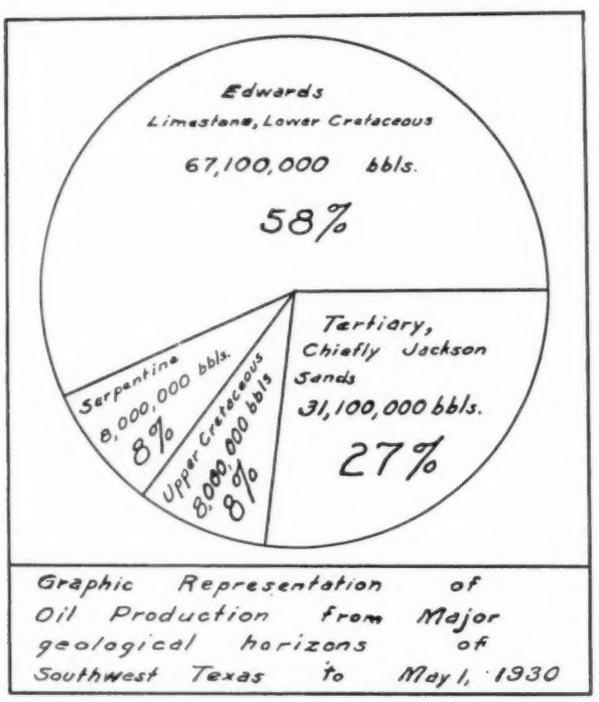
Edwards Limestone and Jackson sand have produced around 100,000,000 barrels of oil

By RICHARD A. JONES
Geologist

THE activity of the oil business is migratory. As the Bedouin tribes of Arabia and Persia journey hundreds of miles across the desert, seeking grass for their herds of sheep and camels, so the petroleum industry travels back and forth hundreds of miles, searching for oil fields. No great business is such a nomad as the oil industry.

The immense extent of Texas offers unbounded opportunities for the exercise of this nomadic tendency of the petroleum industry. As one producing district becomes quiet after a period of discovery of new fields, another district springs into prominence. From the pine forests of East Texas oil men rove hundreds of miles westward to the fringes of the Rocky Mountains beyond the gorges of Pecos River. From the tidewater flats of the Gulf Coast at Houston and Beaumont, they migrate hundreds of miles northward to the high, windswept plains of the Panhandle, 3000 feet above sea level. However, oil men do not accomplish their migrations, mounted high on the swaying back of a camel like the Arab tribesmen; but move rapidly across the country, behind the steering wheel of a high powered motor car; or, with increasing frequency nowadays, seated in the cabin of an airplane, which flies through the air at a speed of 100 miles an hour.

At present one of the most active regions of Texas is Southwest Texas, centering on San Antonio. It is to this widespread territory, as large as the state of Kansas, to which the latest immigration of oil men has occurred, stimulated by the recent development of the Darst Creek, Refugio, and Pettus fields.



Graphic Representation of Oil Production from Major geological horizons of Southwest Texas to May 1, 1930

Operating Districts of Southwest Texas

There are, geographically, and from the operating viewpoint, three distinct producing districts in Southwest Texas; as follows:

1. The Luling or Balcones Fault district, adjacent to San Antonio;
2. The Laredo or Mirando district; and
3. The Refugio and Pettus or Corpus Christi district of the Gulf Coast.

The total production of oil from these three districts of Southwest Texas totaled, to May 1, 1930, in round numbers, 115,000,000 barrels. The Laredo and Coastal districts also constitute one of the greatest reservoirs of natural gas in the United States, but the present article is concerned primarily with the oil production of the region.

Two Great Geological Horizons

Geologically, the production of Southwest Texas does not coincide exactly with the geographical and operating divisions of the area. Oil has been developed from numerous horizons ranging in depth from 150 feet in the shallow Charco Redondo field of Zapata County to 6500 feet in the Refugio field of Refugio County. A detailed tabulation of the depths of the scores of productive strata of Southwest Texas is confusing to the operator; but, out of this puzzling confusion, the geologist may classify the production of Southwest Texas in a simple manner.

The many producing horizons of Southwest Texas may be placed in four major groups, geologically:

1. Production from the Edwards limestone of Lower Cretaceous or Comanche age.
2. Production from the Taylor marl and Austin chalk of Upper Cretaceous age.
3. Production from serpentine or altered igneous rock.
4. Production from sands of Tertiary age, to date principally from the Jackson formation.

Of these four major geological producing zones, the first three produce in the Luling or Balcones Fault district. The production from the fourth group is found in both the Laredo and the Coastal districts. The following table gives the total and relative oil production of these four major geological horizons to May 1, 1930:

	Barrels	Per Cent
Edwards limestone	67,100,000	or 58
Tertiary sands, chiefly of Jackson age	31,100,000	or 27
Upper Cretaceous	8,000,000	or 8
Serpentine	8,000,000	or 8

It will be seen from the above analysis that the preponderant part of the production of Southwest Texas has, to date, come from two of these four major producing groups. The Edwards limestone has produced 58 per cent of the present total. The Tertiary beds, have produced,

dominantly from the Jackson sandstones, 27 per cent of the total. It is, then, these two horizons, the Edwards limestone of the Lower Cretaceous and the Jackson sands of the Eocene division of the Tertiary which are the most important producing horizons of Southwest Texas, in the light of present development.

All operators in the Luling district are familiar with the Edwards limestone. To the present three large fields have been found in the Edwards limestone,—the Luling and Salt Flat or Bruner fields, in Caldwell County; and the Darst Creek field in Guadalupe County. One small pool has been discovered,—the Larremore field, in Caldwell County.

The Edwards limestone produces on the Southeast or upthrow side of faults in the Luling fault zone, which lies to the southeast of the main Balcones slippage, and is continuous with the Mexia-Corsicana fault zone of East Central Texas. However, in the Corsicana district, the Woodbine sand, instead of the Edwards limestone, is the producing horizon. There is no Woodbine sand in Southwest Texas.

In the productive district, the Edwards limestone is very porous, often having large cavities and crevices, especially in close proximity to the faults. Sulphur water is commonly found in the limestone in association with the oil. In some cases, sulphur water flows of as much as 20,000 barrels daily have been found, where oil was absent.

The depth at which the Edwards limestone produces is variable, depending upon the distance from the main Balcones fault, here it appears on the surface. The approximate depth of the Edwards in the four fields to date developed is as follows:

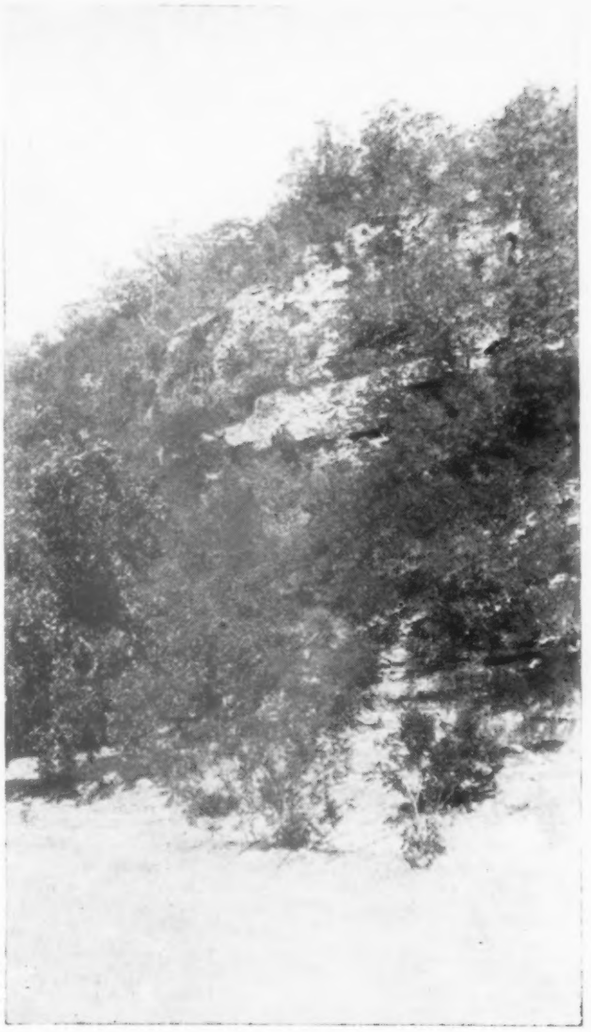
Larremore field, Caldwell County .....1300 feet
Luling field, Caldwell County .....2100 feet
Darst Creek field, Guadalupe County .....2600 feet
Salt Flat field, Caldwell County .....2700 feet

There is no reason why deeper production should not also be found in the Edwards limestone under proper conditions coastward or southeast of the present producing pools.

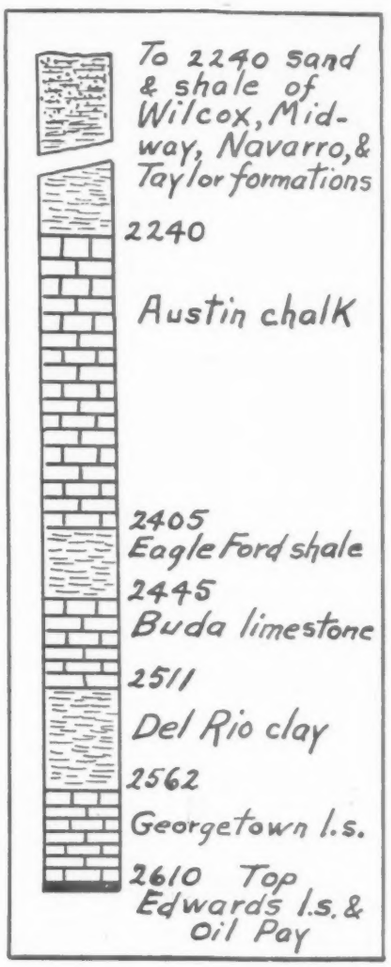
The gravity of the Edwards oil varies. The petroleum of the old Luling field is 24 to 28 gravity; that of the Salt Flat field is 37 gravity; and the Darst Creek oil is likewise high gravity, being of 36 or 37 degree grade.

As has been mentioned previously the Edwards limestone is of Lower Cretaceous or Comanche age. The accompanying graphic log of The Texas Company's Dallas Wilson 1, the discovery well of the Darst Creek field, Guadalupe County, shows the geological and drilling column, which must be penetrated to reach the Edwards limestone pay in that pool.

When the Luling field was first opened in 1923, there was considerable speculation whether the limestone reser-



High bluff of Edwards limestone, in northern Bexar County, on southeast or downthrow side of main Balcones fault. It is this limestone, which, coastward from the surface outcrop, has been the subterranean reservoir of over half the oil produced in Southwest Texas



Log of Texas Company's Dallas Wilson 1, discovery well of Darst Creek field, Guadalupe County, Texas, showing rocks penetrated in this field

voir would be a steady, consistent producer. However, the Edwards limestone has proved one of the best producing horizons in the oil fields of Texas. To May 1, 1930, the old Luling field produced 48,000,000 barrels of oil; and the present daily yield is around 9000 barrels. The Salt Flat or Joe Bruner field, to May 1, 1930, put into the pipe line 17,000,000 barrels. This large production has been made since October, 1928, in less than two years; and the daily production of the pool is now about 21,000 barrels.

Exposures of Austin chalk, with more than normal dip, in the Balcones fault zone of northern Bexar County. The chalk has produced many remarkable, erratic wells in Southwest Texas, among them the largest well of the region—Magnolia Petroleum Company's Roemel 3, in Darst Creek field, Guadalupe County, making 42,000 barrels initial production

The Darst Creek field, Guadalupe County, discovered in July, 1929, yielded to May 1, 1930, about 2,000,000 barrels. However, for many months, the Darst Creek pool was held practically undrilled. Real development only started the first of 1930; and since then the production of the field has been closely restrained by proration rules. At present, Darst Creek, under proration, is producing around 28,000 barrels of oil daily.* It is difficult to say exactly what would be the daily production of Darst Creek, if all proration were removed and the wells allowed to run unrestrictedly on open flow or pump. The production, under any estimation, would be much larger than that now allowed. In the opinion of many competent oil men, Darst Creek has possibilities of larger flush production, and larger total ultimate yield, than either the Luling or Salt Flat fields.

Jackson Sands

The coastal plain of Southwest Texas, south and east of the outcrop of the Upper Cretaceous rocks, is composed of strata belonging to the Tertiary and Quaternary systems, the deposits of Quaternary or Pleistocene age being those immediately adjacent to the Gulf of Mexico. The Tertiary rocks of the coastal plain comprise the Pliocene, Miocene, Oligocene, and Eocene series. The Eocene is the oldest division of the Tertiary, and outcrops farthest inland from the coast.

The two uppermost or youngest formations of the Eocene are the Frio clay and the Fayette sandstone. These two formations together form the Jackson group of the Eocene in Southwest Texas. The wide term "Jackson" is coming into increasing use, for the reason that, in the subsurface work of paleontologists, the small fossils which form the basis of their determinations, occur in zones of generalized Jackson age. It is both easier and more scientific to classify various producing horizons as such and such fossil zones of the Jackson, than to attempt to correlate these producing horizons precisely with the formation names of surface outcrops. The subsurface paleontological work does not agree exactly with the old surface classifications, which were based primarily on lithology, or the rock character of the formations, whether, for example, they are predominantly shale and clay, or chiefly sandstone.

It is, as previously noted, sands belonging to the Jackson group of Eocene sediments, which have to date furnished the greater part of the oil production, in the fields of the Laredo and Coastal districts. The Jackson sands are becoming of more and more importance to the oil industry as the reservoir rock of numerous oil fields.

Laredo or Mirando Fields

Many oil and gas fields have been developed in the Laredo or Mirando producing region, chiefly east of Laredo along the general trend of the Reynosa Escarpment. The most important fields are the Schott-Mirando City, Aviators, Albercas, and Carolina-Texas pools, in Webb County; the Cole field, lying both in Webb and Duval Counties; the Schoolfield-O'Byrne or Government Wells, Driscoll and Kohler pools, in Duval County; the Henne-Winch-Fariss and Randado fields, in Jim Hogg County; and the Mirando Valley, Muckelroy or Escobas, Jennings, and Cuellar fields, in Zapata County. Of these numerous pools, the Albercas, Henne-Winch-Fariss, and Randado fields have perhaps been the most productive, although the oil fields of the Laredo district have not to date been prolific pools of large production. On the other hand the Carolina-Texas and Cole fields have furnished immense quantities of natural gas. The Escobas field, in Zapata County, now in process of development, promises to be one of the best pools of the Mirando area.

Northeast of the Laredo district proper in Duval, Webb, Jim Hogg, and Zapata Counties, the small fields of McMullen and Live Oak Counties, as Crowther and Calliham, can best be indexed as belonging to the Mirando group of fields. The Mirando district, however, merges gradually on the northeast, east, and southeast into the coastal producing region. The dividing line is subject more or less to individual preference, as no hard and fast demarcation can be drawn.

The production of the Mirando district is, so far, shallow, ranging, for the most part from 1200 feet to 2400 feet. Oil in the Mirando City-Aviators area is found at the approximate depth of 1500 to 1700 feet. In the Randado and Escobas pools, production is obtained around 1200-1300 feet. In the Henne-Winch-Fariss field, the average depth of the producing sand is between 2100 and 2200 feet. The possibilities of deep production in the Laredo territory are, however, promising, as beneath the present shallow productive horizons there is a great thickness of sediments of older Tertiary age, suitable for oil and gas. The Laredo district to May 1, 1930, had produced 24,000,000 barrels of oil.

The normal gravity of the Mirando oil is from 20 to 22 degrees. There are, however, exceptions, to this. In the Mirando City pool 45 gravity crude occurs in a sand around

2000 feet. Likewise, high-gravity oil of 36 to 42 degrees, has been developed in the Carolina-Texas field in 2600 and 3000-foot sands.

The great bulk of the oil of the Laredo or Mirando district is coming from sands of Jackson age. The most important pay is the Mirando sand, in the Fayette formation, one of the subdivisions of the major Jackson group. The Mirando sand has produced over an extensive region in the Laredo area, the producing sands in the Schott-Mirando City-Aviators, Albercas, and Henne-Winch-Fariss pools, from 1450 to 2200 feet, being all held to be the same Mirando sand; as are likewise the 2000-foot gas sand of the Carolina-Texas field, and the 2300-foot pay of the Cole field.

The Cole sand, above the Mirando sand, occurs in the upper part of the Fayette formation. It is, therefore, the same as the Mirando sand, of Jackson age. One of the most important oil producing localities of the Cole sand is in the Randado pool from the 1200-1300-foot pay. This horizon, however, derived its name from the 1700-foot gas sand in the Cole field.

The structural conditions which dominate production in the Mirando district are somewhat deversified. Fauling, accompanied by anticlinal folds or "noses," causes the accumulation in various fields. The faulting, however, is of relatively small vertical displacement not to be compared with the large faults of 400-foot throw of the Edwards limestone producing area. Among fields in which faulting plays an important role are the Schott-Mirando City-Aviators, Carolina-Texas, and Henne-Winch-Fariss pools.

Sand lensing, or the occurrence of trends of sandstone, along what appear to be old shore lines of the Eocene ocean, also have a part in the trapping of the oil of the Laredo district. These old sand shore lines perhaps once fringing sand barriers or bars similar to the long, narrow islands of sand now bordering the gulf coast from Corpus Christi to Brownsville, pinch out to the west sharply. The production of the Randado field, in Jim Hogg County, is held to be controlled by this phenomenon of sand lensing.

The shallow producing Jackson horizons of the Laredo district occur in zones of sand and sandy shale, often associated with beds of lignite and oyster shells. The productive sands themselves are seldom more than 10 to 20 feet thick. In the old Mirando City field, two oyster shell beds exist a few feet above the pay sand. The Jackson producing sand of the Laredo area is quite distinctive in character, being a gray sandstone with numerous small black specks. To the naked eye it closely resembles various surface outcrops of the Fayette sandstone, being, in fact, the same sand. The following analysis shows the character of the "Mirando" producing sand under the microscope:

Black Panther Oil Company, Well number 2, Aviators field, Survey 607, Webb County: "1587-1589 feet — Core — cent clay. Sand consists of medium size to fine, angular and subangular, fragments of translucent quartz and rhyolite. A few grains of chalcedony noted. Some of the rhyolite is altered to chlorite. Fragments of shells, possible oysters. A show of oil. This sand made a 125-barrel pumper. Fayette (Jackson)."

Refugio

The Refugio field is in Refugio County, in the Gulf Coast producing district of Southwest Texas, about 40 miles north of Corpus Christi. For many years Refugio was exclusively a gas field, yielding natural gas from various shallow horizons. However, on July 28, 1928, Texas Gas Company's Clint Heard 1, came in, flowing 700 barrels of 26 gravity oil from sand at 3682 to 3702 feet.

This well initiated the development of Refugio as a major oil field. In the last two years, Refugio has produced around 6,000,000 barrels of oil, principally from the 3600-3700-foot sand. At present Refugio is the largest Gulf Coast field, producing around 34,000 barrels daily.

According to the writer's information, this 3600-foot production at Refugio is coming from sediments of Upper Oligocene age. These rocks consist of sandy shales and calcareous sands, carrying the oil-bearing horizons. The oil sands themselves contain marine shells, the character of which indicates that the sandstone in which they are found, was originally a beach or shore line deposit. Thus, so far, the prolific production of Refugio has not come from the Jackson sands, for the Oligocene formation overlies the Jackson and is younger in age.

However, Refugio has obtained distinction as the only field in Southwest Texas having important production below 5000 feet. These deep sands were discovered on September 26, 1929, when Mission Drilling Company's O'Brien 1 was completed at 5513-5525 feet. To April 1, 1930, this well had produced 76,000 barrels of 32 gravity crude. Around a dozen or more wells have, to the present, been successfully finished in the 5500-foot sand. In addition, still deeper horizons have been found, at 5800 feet and at 6500 feet. The discovery well of the 6500-foot pay was Union Producing Company's Rose Lambert 1-A, completed on April 1, 1930, at 6456-6468 feet. For a time this well yielded as much as 200 barrels daily of 42 gravity crude, but gradually went to salt water. Recently, about the middle of June, 1930, Mission Drilling Company's Moss 1, was finished at 6454-6470 feet, flowing 500 barrels per day,—the second 6500-foot well.

Available information indicates that this very deep production at Refugio, from 5500 to 6500 feet, may be from the Jackson sands. It is the writer's understanding that these deep sands from 5500 to 6500 feet are tentatively classified as belonging to the Frio and Fayette formations, which would make them of Jackson age. However, paleontologists have not yet, it seems, definitely proven the Jackson age of the deep Refugio sands, since the typical fossil zones of the Jackson have not, so far as the writer knows, been firmly established at Refugio. In view of this, the author cannot make a positive statement that the deep Refugio sands are Jackson in age.

(Continued on page 49)

Outcrops of heavy Fayette or "Jackson" sandstone in northern Kansas County. This same sandstone zone furnishes the oil of the Pettus field in Bee County to the southeast

Moreni's Burning Well Defeats *At* Control

Burning well at Moreni, Roumania, No. 160 of the "Romana-Americana," Standard Subsidiary

Many methods tried on well that has been burning since May 28, 1929

ENGINEERS representing the Roumanian Inspectorate of Mines have officially abandoned the third major attempt to extinguish the famous burning well No. 160 on the property of the Societe Romana-Americana at Moreni; and the company has been authorized to proceed with the deepening of two shallower offset wells, through which a fourth effort to kill the wild well will be made by pumping fluid into the gas-bearing sand.

Since the failure of the official effort at extinguishment, the condition of affairs is now definitely worse than ever before. All connections have been blown off the casing head, around which a large crater has formed; the casings have been shredded and worn thin by the action of escaping gas and sand; continued vibration for more than a year has doubtless developed many collar leaks, and leaks around the apparatus used by the Roumanian engineer, Vasile Lazar, in his recent abortive effort at extinguishment render it unsafe to attempt further tunnelling operations. The casings have been cut and weakened to such an extent that control equipment would be useless even if it were possible to install it; so nothing remains but to attempt to kill it by means of relief wells.

The Lazar apparatus has what might be termed a certain "laboratory" interest, as a method that failed. The company's plan is of interest as a method which might have succeeded. In fact, it is based upon plans which were successfully executed in the control of Geo. F. Getty's Nordstrom well No. 17, at Santa Fe Springs, California, which caught fire on September 16, 1928, and was extinguished 48 days later.

Well No. 160-SP blew out and caught fire on May 28, 1929, since which time it has been burning continuously and has caused the death of ten workmen and the injury of scores of others. It came

All Efforts

By ROY E. LEIGH
Special Foreign Representative

in against a 4769-foot column of barite-mud fluid weighing 15.6 pounds per gallon; stalled three compounded slush pumps at 1440 pounds pressure; destroyed a rotating type blowout preventer and valves and fittings all of which had been tested to withstand 3000 pounds pressure, and blew out 25 fourbles of four-inch drill pipe. It is estimated that it had an initial pressure of 3600 pounds per square inch and an initial production of 177,000,000 cubic feet of gas per day.

The control equipment included a second blowout preventer of the manually-operated Cameron type; but this was not effective, as the rams had not been changed to conform to what was expected to be only a temporary change from three-inch to four-inch drill pipe.

The official log of the well shows that it was cased with six strings of pipe, as follows:

Diameter in inches	Depth in feet	Remarks
28	62	Surface pipe
18	1,750	Official water shut-off; cemented
14	2,418	Official water shut-off; cemented
10	4,377	Official water shut-off; cemented
8	4,369	Official water shut-off; pressure test
6¼	4,750	Official water shut-off; pressure test
	4,793	Total depth.

The essential features of the Lazar plan

Mouth of tunnel through which the casing of the famous burning well was reached at a point 195 feet underground. In this photograph are seen (a) electric cable carrying current to the motor; (b) 5-inch mud line; (c) light rails over which was operated a small mine-car; (d) wire cable for the operation of mine-car; and (e) and (f) air pipes for conveying fresh air to the scene of operations in the tunnel.

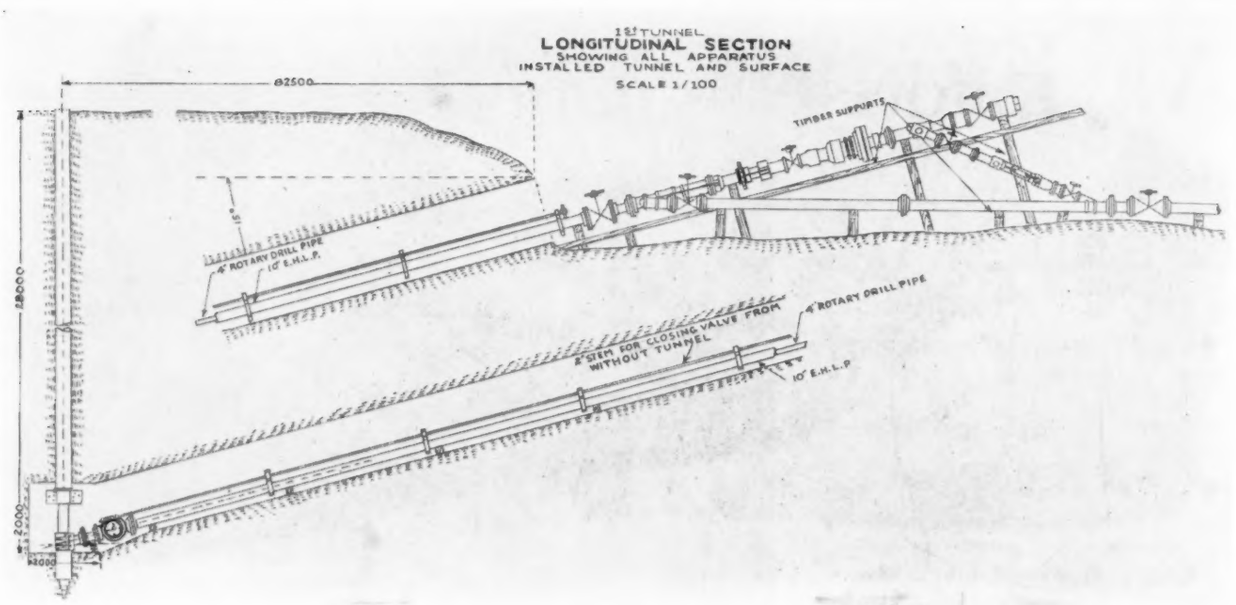


FIGURE 4

included a tunnel which reached the casing at a point 195 feet below the surface, which made possible the application of a saddle around the 18-inch casing. This apparatus resembled a giant tee, standing 8 feet 1½ inches high and weighing 20 tons. A milling tool of a diameter slightly in excess of that of the outer casing operated through the two horizontal arms of this tee. This tool was actuated by an electric motor, operating through a series of gears and countershafts and controlled by switches placed at the mouth of the tunnel. Entering through one arm of the tee and cutting through the several strings of casing, this milling head passed on and came to rest in a recess in the other arm, followed by a close-fitting piston extending from one arm to the other and designed to plug off the opening thus created.

Right (wearing sweater and boots): Engineer Vasile Lazar, author of the plant for extinguishing the Moreni fire. Left (carrying brief-case and hat): Johann Zsigmond, one of his assistants

A mud line was tapped into the casing at a point below this apparatus, through which mud was introduced simultaneously with the completion of the milling process in an effort to kill the well.

These two operations proceeded generally according to plan, and the flow of gas from the mouth of the well was greatly diminished when the piston or plug was driven into position. Apparently, however, a complete shut-off was not achieved; and there must have been small leakages of gas from the saddle into the tunnel, as a subsequent explosion wrecked that excavation and marked the failure of the scheme. But for this explosion, it might have been possible to lubricate the well before the piston or plug was cut away by escaping gas and sand; but its terrific force ruptured the mud-line connection, after which it was impossible to pump fluid into the well.

At present, gas is issuing from the crater with a resumption of old-time force, as well as from the mouth of the tunnel and from about 20 wells in the vicinity. Since they cannot be closed in, inverted cones and chimneys have been built around and over these old abandoned wells; and steam is being injected to render the escaping gas non-inflammable.

Previous Efforts

Previous efforts included attempts by the Andrecscu brothers, Roumanian fire-fighting experts, to attach control apparatus at the surface by inserting a steel die-nipple in the mouth of the eight-inch casing; and an effort by company engineers to draw off the flow of gas through

a tunnel by means of apparatus described below. The first effort of the Andreescu brothers was defeated by the melting of their guy-wires in the intense heat of the flame; and their second by the tremendous pressure of the escaping gas, which blew their apparatus bodily to one side.

In the abortive effort made by company engineers, the casing was reached through a tunnel at a point 92 feet underground; a section of the 18-inch casing was cut away, and the four remaining strings were penetrated by means of a hollow cylindrical forged-steel bit, having heat-treated cutting edges, screwed onto a length of four-inch drill pipe rotated inside of a length of 10-inch line pipe extending to the mouth of the tunnel. This bit, which was driven by a 12 x 14 steam engine installed at the surface, operated through a forged-steel saddle clamped around the 14-inch casing at the bottom of the tunnel. This saddle was reenforced by vertically connected horizontal hoops of one-half-inch round iron, the whole being encased in a block of concrete three feet six inches square cast around it.

The drilling-in operation, which included the perforation of the 14-inch, 10-inch, eight-inch, and 6¾-inch strings on one side only, was accomplished in 20 minutes. Water under 80 pounds/sq. m. pressure was used as a drilling lubricant and to remove cuttings.

As soon as the drilling operation was completed, the bit was turned down and a heavy mixture of mud and barite was pumped into the well for two hours without affecting the fire in the slightest degree.

The bit was then turned until the hole pointed upward, and water was pumped into the gas stream for one hour. This had no effect on the flame, save to increase the length of the unignited gas cone. This latter operation was brought to an end by the freezing of the water in the four-inch drill pipe, which was caused by the expansion of gas escaping between the drill pipe and the sheath of 10-inch line pipe.

The apparatus was so arranged as to permit the withdrawal of gas through the hollow bit and four-inch drill pipe, or, when the bit was withdrawn into the space between the saddle and the control valve, Figure 5, through the 10-inch pipe itself. These two lines were connected to a high pressure Christmas tree, making it possible to regulate the flow of gas by means of flow beans or chokes. Two dephlegmators filled with rachig tubes and one low pressure gas separator were installed on a by pass at a safe distance from the mouth of the tunnel, it being the plan to pass the gas through these dephlegmators in series,

Engineer Nicolae Moldovan, chief of operations on the Moreni burning well

maintaining a pressure of 200 pounds per square inch, and flow the separated liquid into the low pressure trap. The

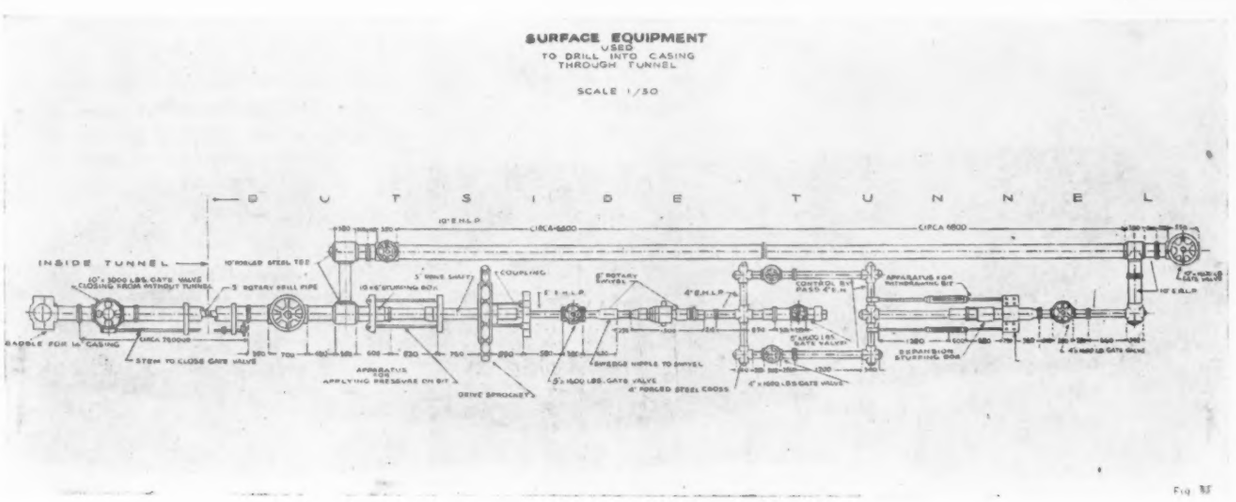


FIGURE 35

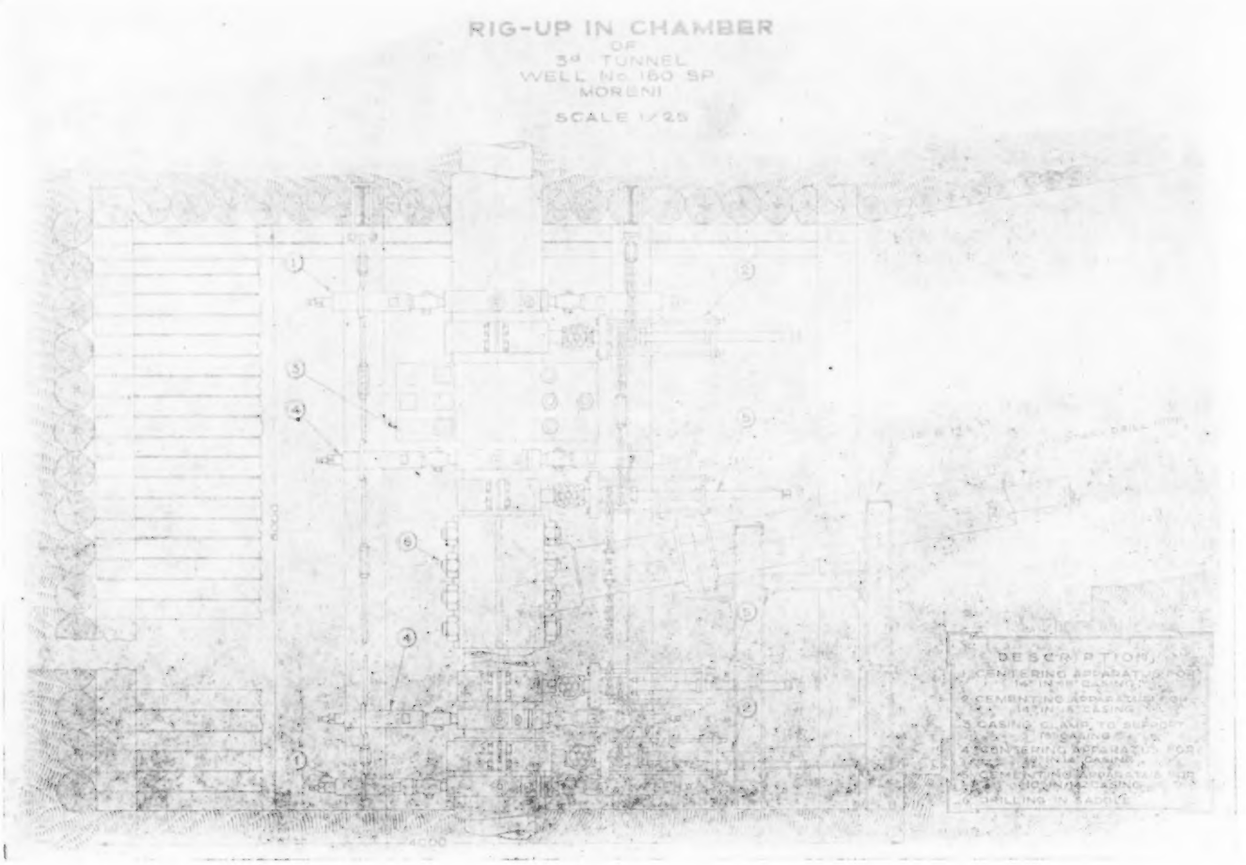


FIGURE 39

high pressure gas flowed from the depthlegmators through a header system which was connected with the company's fuel gas system, gas lift system, gasoline extraction plant, and gas stacks constructed at a point about one-half mile distant for the purpose of disposing of surplus gas which could not be disposed of by other means.

At first, the gas was flowed through a 0.59-inch flow bean under a back pressure of 430 pounds per square meter and burned in the waste gas stacks. Later, it was flowed through two 1.14-inch chokes and gave a maximum metered production of 18,361,200 cubic feet per day. The flow was diverted to the depthlegmators during the period July 12 to August 2, inclusive, which resulted in the recovery of 63,862 gallons of casinghead gasoline.

At no time, however, was there any appreciable diminution of height or intensity of the burning column of gas issuing from the mouth of the well.

Tunnel after explosion

Death Roll

Gas finding its way into the tunnel through collar leaks in the casing and porous surface formations was ignited, presumably by a workman striking a match to light a cigarette, and the resultant explosion caused the death of four miners, as well as the destruction of the tunnel. The collapse of the tunnel caused the spreading of flanges with which the 10-inch pipe was connected at alternate joints; and gas found its way into a second uncom-

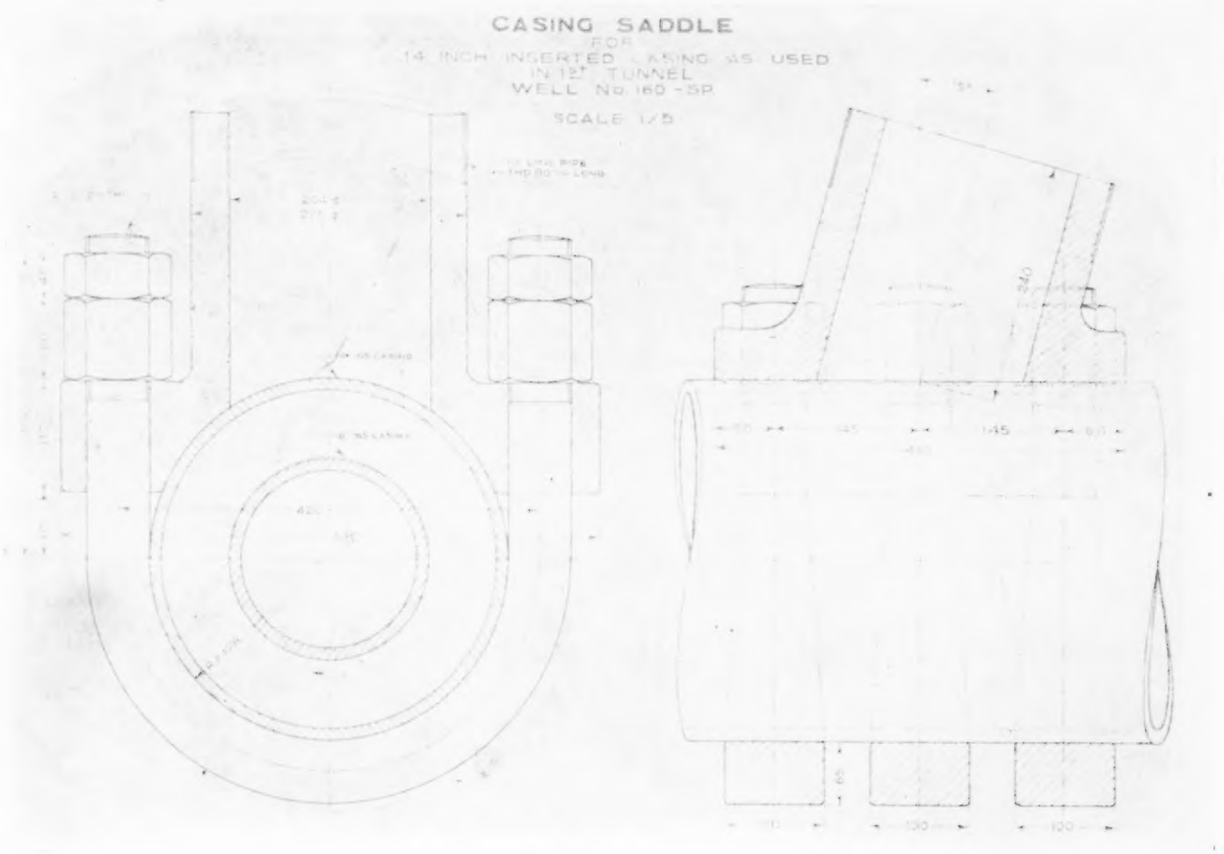


FIGURE 6-a

pleted tunnel which had been driven to a distance of 91 feet from the surface.

Four other deaths were caused by an explosion at the mouth of the third tunnel, which resulted from the ignition of gas by the spattering of molten welding wire during the course of a welding operation undertaken near the mouth of the tunnel.

Two other deaths resulted from the recent explosion which marked the failure of government engineers to extinguish the fire.

Second Plan

The second plan proposed by company engineers before the well was taken over by the government is described herein, by reason of its claim to real engineering merit and in the hope that it may some day prove useful elsewhere.

It was planned to reach the casing by means of a tunnel reaching below the previous excavations. The 18-inch casing was to be penetrated by means of a one-inch twist drill and centered in the 14-inch by means of guides inserted through the holes. Then annular space between these two strings was to be plugged with cement; and a section of the 18-inch was to be stripped away, as in the previous attempt. Similarly, the space between the 14-inch and 10-inch casings was to be cemented; but it was not intended to cut away the 14-inch. The centering and cementation of the 18-inch, 14-inch, 10-inch, and eight-inch strings had as its object the prevention of gas leaks

Showing anchors on nearby wells

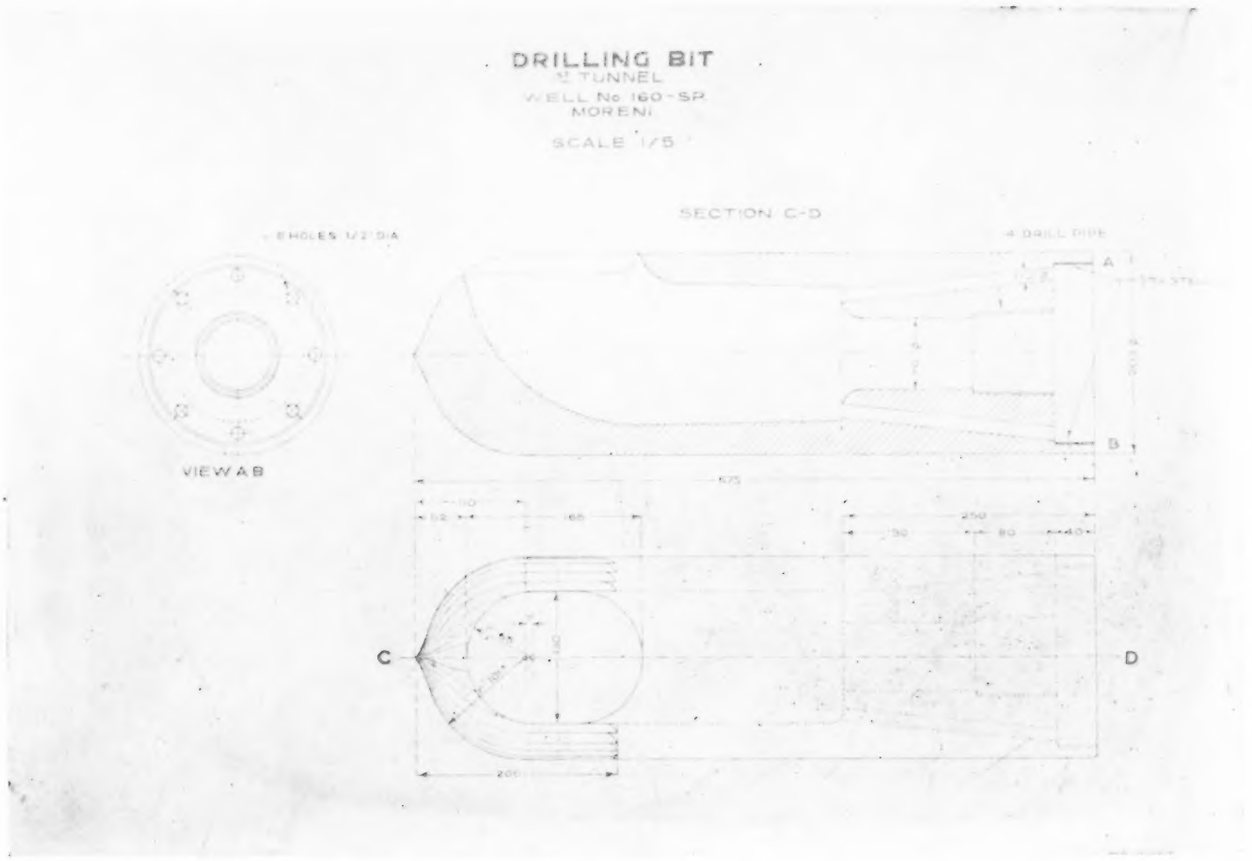


FIGURE 6

around the drill during and after the perforation of the eight-inch and 6¾-inch strings. Motive power swivel drill pipe, and conductor pipe were to be rigged up as shown in Figures 4 and 35.

These several operations were to be accomplished in the following order:

1. Perforation of the 18-inch column of casing at four diametrically opposite points by drilling one-inch holes.

2. Cementing of the 18-inch-14-inch annular space by drilling into the 18-inch casing at one point only and introducing cement through a two-inch line extending to a cement pump at the mouth of the tunnel.

3. Cutting away a section of the 18-inch column.

4. Mounting a clamp on the 14-inch casing to support the upper remaining section of 18-inch pipe.

5. Centering the 10-inch inside the 14-inch.

6. Cementing the 14-inch-10-inch annular space.

(Space between the 10-inch and eight-inch casing to be cemented only in the absence of high pressure gas.)

7. Mounting of cast steel saddle together with a guide for the large bit to be used in perforating the several strings of casing.

8. Mounting a 10-inch 1500-pound test gate value immediately after the guide. This valve to be operated by means of a long stem extending to the mouth of the tunnel.

9. Laying of five-inch rotary drill pipe inside 10-inch extra heavy line pipe (each joint flanged) supported on frame work, as shown in Figure 4.

Exterior installations were to include the following:

(a) A 10-inch 1500-pound gate valve, to be used only if the drill pipe and bit are to be removed from the 10-inch line pipe.

(b) A 10x8x10-inch forged tee, one arm connected to an eight-inch by-pass (which might be used for pumping water or flowing steam between the five-inch rotary drill pipe and the 10-inch line pipe during drilling operations). The other arm to be connected to a 10x5-inch stuffing box packing off the five-inch drill pipe.

(c) An apparatus for advancing the drill, anchored to a 5x10-inch stuffing box.

(d) A sprocket attached to five-inch drill pipe and sliding on a key. This sprocket to be connected by a drive chain to a 15-horsepower steam engine.

(e) The end of the five-inch drill pipe to be screwed into a special rotary swivel, the opposite end of the latter being connected to a four-inch control by-pass. This latter connection is designed to enable the introduction of mud fluid under pressure during drilling operations; after drilling operations it can be used for flowing gas produced. The end of this by-pass to be connected in turn to the above mentioned eight-inch by-pass. This connection to be utilized only in case of need in addition to that of the four-inch for flowing of the gas produced.

10. Drilling through the four strings of casing. The 6¾-inch casing was believed to have been blown out down to this point; and the bit, being slightly larger in diameter, was designed to plug the eight-inch casing, leaving its hole or water course pointing downward for the introduction of mud.

11. Pumping mud through hollow bit to kill well.

Two Great Producing Horizons in Southwest Texas

(Continued from page 41)

The rocks at Refugio below 5500 feet are principally non-calcareous shales, sandy shales, and sands. Lignite has been noted in well samples. There are also some limey strata. The production from these deep sands has not been sufficiently developed to enable an accurate forecast of the future potentialities of the oil-bearing horizons between 5500 and 6500 feet.

The structure at Refugio is entirely different from that of the Mirando fields of Southwest Texas. The Mirando fields are usually long, narrow pools of the shoestring type. Refugio, on the contrary, is a large round or egg-shaped field, some two miles wide from east to west, and some three miles long from north to south. Thus it resembles in the shape of the productive acreage, an extensive salt dome. However, no salt has yet been drilled into despite the presence of holes 6500 feet deep. Refugio may be an extremely deeply buried salt dome, for it is located in the salt dome area of the Gulf Coast; or it may be a large structure entirely independent of salt domes.

Pettus Field, Bee County

The most recent major development of the Coastal region of Southwest Texas has been the Pettus field, in northern Bee County, some 15 miles northwest of the city of Beeville. In February, 1930, Houston Oil Company completed McKinney 1, about one mile east of the townsite of Pettus, for 750 barrels of 45 gravity crude, from the total depth of 3971 feet. The well was turned over to Humble Oil & Refining Company, which had the oil rights on the lease, Houston Oil Company possessing the gas privilege only.

Since the bringing in of the discovery well, a considerable number of other good wells have been completed in the immediately adjacent area. The development of the field is only getting under way.

The depth of the pay horizon in the original discovery site east of Pettus, is, as has been mentioned, 3900 feet. However, Cosden Oil Company's R. A. McKinney 1, about one and one-half miles west of Pettus, and almost three miles west of Houston-Humble's Mrs. M. M. McKinney 1, was recently finished for 600 barrels, from the depth of 3633 feet. This horizon is 300 feet higher than the discovery Pettus sand. More recently, Grayburg Oil Company's A. J. Kimball 1, six miles west of Pettus, has been completed as a good well from pay at 3563 feet. Thus oil has been found at Pettus over an area eight miles long.

All development so far indicates that a large field or group of fields, of high gravity oil, have been discovered at Pettus. Leasing activity has been intense throughout the general Pettus and Bee County area. The field is without doubt one of the most important discoveries in many years in Southwest Texas, opening up a vast new area for exploration.

There has not been sufficient drilling to date definitely to outline the structure of the Pettus field, or possible series of fields. It is thought that production in the Pettus territory is coming from the Jackson sands. In determining the Jackson in the subsurface, the paleontologist uses as markers—the shells or tests of certain microscopic animals known as Foraminifera. There are numerous varieties of these small fossils. A species very valuable in determining the presence of the Jackson formation is known as Textularia. Different species of Textularia occur in different zones of the Jackson rocks. For example, two zones of the Jackson differentiated by paleontologists, are called the Textularia hockleyensis zone and the Textularia dibollensis zone. It is the writer's information that the petroleum at Pettus is coming from the Textularia dibollensis zone of Jackson age.

As noted previously the Pettus field is just getting under headway. The production figures have, therefore, not been included in the total of Southwest Texas Tertiary production listed in this article. The daily yield at Pettus is, at present, around 5000 barrels. In the future the field should add a large amount to the oil produced from the Jackson sands of Southwest Texas.

Serpentine or Igneous Rock Fields

Texas possesses the distinction of having oil fields which produce from a rock formation that furnishes petroleum nowhere else in the United States. This unique formation is serpentine, an altered igneous or volcanic rock green in color and very porous. It occurs in the subsurface in association with deposits of Upper Cretaceous age, chiefly the Taylor marl and the Austin chalk. The serpentine is usually found in the form of dome-like masses or "plugs," intruded into the sedimentary rocks. There is not space in the present article for a discussion of this most interesting occurence of oil in igneous rock. However, those who might wish to read detailed account of serpentine and its structural relation to oil fields, may consult a paper[1] by the author on this subject in The Oil Weekly in the files of August, 1925.

The largest pool of Southwest Texas producing from serpentine is the Lytton Springs field in Caldwell County. To May 1, 1930, the Lytton Springs field had produced around 6,000,000 barrels of oil. The gravity of the petroleum is 39 degrees and it is found at depths from 1200 to 1600 feet, depending on the location of the wells on structure. Among other serpentine fields of Southwest Texas are the Dale and Buchanan pools in Caldwell County; and the Yoast pool in Bastrop County.

The Thrall field in Williamson County was the original discovery serpentine pool of Southwest Texas, being found in 1915. The newest serpentine field is the Chapman pool, likewise in Williamson County, about eight miles southeast of Thrall. The discovery well was E. L. Chapman's Abbot 1, which, on January 17, 1930, gauged 1500 barrels of 36 gravity crude from the depth of 1834 feet. To the present about 20 additional wells have been completed. The field has been retarded by lack of pipe line facilities; but current production is estimated as around 20,000 barrels daily.

Upper Cretaceous Oil

The Upper Cretaceous formations of Southwest Texas have furnished various shallow pools. The most important of these is the Somerset field 18 miles southwest of San Antonio. Other shallow fields in Bexar County have produced from the Upper Cretaceous, among them the Yturri, Dobrowolski, Southon, Alta Vista, Mission, and South Medina pools. In Medina County, the oil of the Ina field is from the Navarro or Escondidio formation.

The Somerset field lying in both Bexar and Atascosa Counties, is such an old settled pool that operators seldom realize that it is really one of the most remarkable shallow fields of the United States. The producing acreage at Somerset is about 10 miles long by 1½ miles in width. The average depth to the pay is 1400 feet. Literally hundreds of wells have been drilled. Some few deep tests have been sunk, among them one to the depth of 5361 feet; but to date no deep oil has been found. The small wells of Somerset produce from sand lenses in the Taylor marl and from the cracks and crevices of the shale. The Somerset field first began commercial production in 1918. To May 1, 1930, it had yielded about 8,000,000 barrels of oil, from 28 to 43 degrees in gravity. At present this exceptional old shallow pool is still producing around 1200 barrels daily.

The Austin chalk production of Southwest Texas has, so far, been erratic. No consistent fields producing from the chalk have yet been discovered. Sometimes, production in the Austin chalk has pointed the way to deeper production in the Edwards lime in the fault fields. For example, chalk wells, at times making 300 to 400 barrels daily, drilled by Joe Bruner, just north of Luling in the spring and summer of 1928, were the forerunners of the prolific Edwards limestone wells of the Salt Flat or Bruner field. On the other hand, chalk production does not necessarily mean Edwards production below. It is reported that years ago a chalk well making 1000 barrels daily,

[1] "Production of oil from Serpentine in Southwest Texas," Richard A. Jones, Oil Weekly, Aug. 14, 1925, pp. 37-46.

was completed in the Alta Vista pool a few miles southeast of San Antonio. This shallow field, now practically abandoned, is located along a large fault. However, deeper drilling revealed sulphur water in the Edwards limestone beneath the shallow oil.

In the Balcones System fault fields, the chalk has produced some spectacular wells. These large wells have usually been from cavities and crevices in the chalk, directly where the fault had fractured and shattered the rocks. The largest well ever drilled in Southwest Texas was of this type. This remarkable well, Magnolia Petroleum Company's Roemel 3, on the west edge of the Darst Creek field, in Guadalupe County, came in, making oil at the rate of 42,000 barrels daily from crevices in the Austin chalk, from 2312 to 2322 feet. In the northern end of the Darst Creek pool there is a group of chalk producers. The first of these, Magnolia Petroleum Company's Appling 1, had an initial production of 2500 barrels per day from chalk from between 2519 and 2532 feet. This well was recently producing around 800 barrels daily.

Glenrose Producing Horizon

In Maverick County, Rycade Petroleum Corporation for some years has been carrying on deep prospecting on the Chittim and Sullivan ranches. Several holes have been sunk below 5000 feet. One of these attained the depth of 7635 feet.

Rycade Petroleum Corporation's Chittim 1, in 1927, developed 28,900,000 cubic feet of gas and 75 or 100 barrels of high gravity oil from around 5500-5600 feet. This deep horizon is in the Glenrose limestone of the Comanche system. The Glenrose formation underlies the Edwards lime, and is in turn, underlain by the Trinity sands. No definite field has yet been developed in Maverick County in this deep Glenrose limestone, but the production obtained shows that the rocks of Glenrose age have potentialities of developing oil and gas fields. The following portion of the log of Rycade Petroleum Corporation's Chittim 1, shows the nature of the rocks, which have furnished this exceptionally deep oil and gas:

4795-5090—gray lime.

5090-5495—black lime; at 5135 had water at rate of four bailers, 12 hours; at 5190, little gas, water exhausted.

5495-5520—gray lime, little gas at 5208; 3,500,000 cubic feet gas at 5520, spray oil.

5520-5591—sandy gray lime.

5591-5640—gray lime; at 5588, 9,260,000 cubic feet gas, which later increased to 28,980,000 cubic feet with oil.

Fossils were found in the cuttings from below 5000 feet. Between 5000 feet and 5506 feet there were identified orbitulina texana and Milliolina foraminifera. Orbitulina texana is a form very commonly found in the Glenrose limestone; and, in conjunction with the geologic section penetrated by Rycade Petroleum Corporation's Chittim 1, determines the age of this 5500-5600-foot oil and gas horizon.

Conclusion

As has been emphasized in previous paragraphs of this paper, the Edwards limestone of Lower Cretaceous age and the Jackson sands of the Eocene period of the Tertiary system have to date furnished the major part of the petroleum of Southwest Texas. They are at present the dominating oil zones. The lead which these two foremost producing horizons have achieved will be hard to overcome.

However, other portions of the geological section also have great potentialities in Southwest Texas. The 3700-foot pay at Refugio, which has so far furnished the bulk of Refugio production, as has been noted, is in sands of Oligocene age, deposits which are younger than the Jackson sands. The Miocene sediments have, moreover, furnished oil in the coastal area, for instance, in the Kingsville pool of Kleberg County. Much gas has been produced from the Miocene on the Gulf Coast, as, for example, in the White Point and Ague Dulce fields near Corpus Christi. In addition to these producing horizons which lie above the Jackson sands, that portion of the Tertiary beneath the Jackson formation has possibilities.

Reference has been made to the potentialities of the Glenrose limestone of the Lower Cretaceous. The Trinity or Basement sands beneath the Glenrose lime, also offer oil and gas possibilities in the future, especially if these sandstones rest unconformably in some regions on petroliferous rocks of Pennsylvanian age. The Pennsylvanian itself may produce in the general Edwards Plateau territory north and west of San Antonio.

The deep drilling which is becoming so prominent a part of the activity of the oil industry everywhere may find large rewards in Southwest Texas. Already production has been developed below 5000 feet at Refugio field*.

No man with a spark of imagination in him can stand on the derrick floor of a really deep test, watching the rotary table turn, without experiencing a thrill of amazement. Beneath his feet is a tube of drill stem, perhaps over a mile long, on the end of which a bit is revolving and boring its way toward oil sands, utterly impossible to reach a few years ago. The writer can never watch the driller controlling his rig on a deep test without feeling this thrill at the idea of the bit turning round and round down there a mile or a mile and a half below the surface of the earth. There is much praise of the technical achievement of the petroleum industry. The driller, remarkable to say, does not receive much of this praise. He quietly handles his brakes and drills his holes. However, it should be "hats off" to the driller on the derrick floor, for it takes a good man to drill a hole a mile or more deep. The Gulf Coast of Southwest Texas is underlain by a vast thickness of thousands of feet of Tertiary rocks which offer unlimited chances for deeply buried oil sands. The discoveries to be made by deep drilling constitute one of the most interesting possibilities of the future in Southwest Texas.

*Since completion of this article, oil has been found for the second time below 5000 feet in the coastal region of Southwest Texas. The week of July 11, 1930, Houston Oil Company's Boothe 1, in Live Oak County, cored five feet of saturated sand from 5252 to 5257 feet. On a drill stem test the well showed 300 feet of oil and a fair volume of gas in 12 minutes. This deep strike is on the northeast edge of the Lucas gas field, and is in the southwest trend from the Pettus pool in Bee County. Casing will be set for a definite test of production.

Texas Production Curb Assures Early Stabilization

(*Continued from page 37*)

Although there is some opposition in West, Southwest and Coastal Texas, there is reasonable assurance that crude production in Texas will be reduced by at least 45,000 barrels a day within a short time after August 27. This will bring Texas production down to about 775,000 barrels and will result in reducing the national daily average production to about 2,435,000 barrels.

If satisfactory arrangements are made to reduce production in the Big Lake field of West Texas and in the fields of Southwest and Coastal Texas, the result will bring the United States production curve down to approximately 2,400,000 barrels. It is readily seen that such a result will have a telling effect upon the economic situation to the extent that further slight downward revisions in other states would readily effect a balance between supply and demand.

Durango, Colo.—The Ute Indian reservation lease which was let at the Santa Fe auction on August 2, with a bid of $47,200, or a price bonus of $10 per acre, was awarded to Southern Gas Company. The only other bidder was Empire Gas & Fuel Company, whose bid has not been ascertained, but is said to have been considerably lower. Price paid for the lease is considered very cheap in view of the fact that Gypsy Oil Company's well, believed at one time to be good for 70,000,000 to 100,000,000 feet of gas, was located on the acreage.

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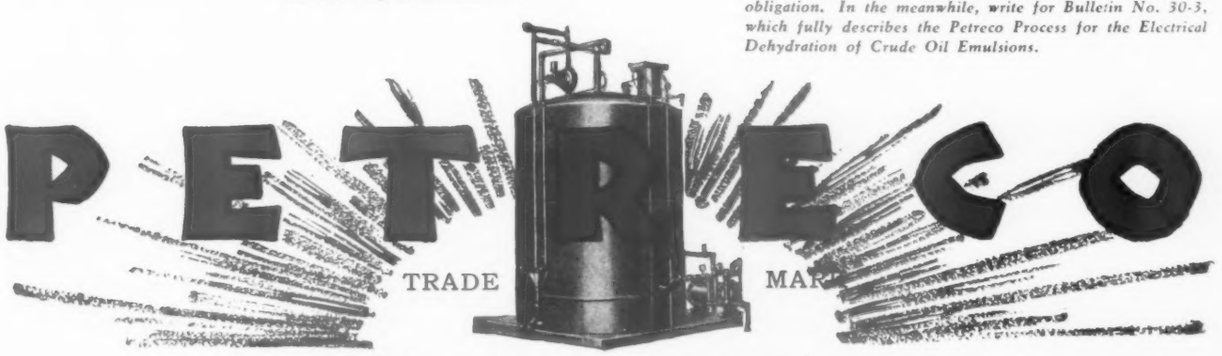

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MEMORIALS

By HARRY BOTSFORD

THE men who have made oil field history have been entirely too concerned with the affairs of today to bother with the labor and the cost of erecting imposing memorials to their deeds. Further, they have been modest men. Therefore it has remained for other generations to carry out that particular task.

And up in the Northwestern corner of Pennsylvania where oil field history was made away back in the time when the industry was in its swaddling clothes the task has been carried out in a very pleasing manner. Locally one doesn't hear much comment on the matter — but each year a steady stream of tourists do comment on the matter — with a small and agreeable enthusiasm.

The first memorial of interest is located in Woodlawn Cemetery at Titusville, Pennsylvania. When the ground was purchased for this memorial it stirred up considerable local excitement. Mystery surrounded the work. It was generally known that a memorial was to be erected to the memory of Edwin L. Drake who drilled the first artesian oil well but further than that only few knew. The work was under the personal direction of Calvin N. Payne of Titusville. Mr. Payne was a wealthy man, a Standard Oil official. Yet he took pains to inform the public that the memorial was not endowed by his personal wealth. He was merely representing an unknown principal.

The work progressed on the site at the head of the driveway into the most beautiful cemetery of the city. The unveiling of the monument was an impressive affair and well attended. But still no hint of the identity of the donor.

The memorial is a dignified and gracious expression in chaste marble and dull bronze. The sculptor was C. H. Neihaus of national repute.

The inscriptions on the panels of the oval are flowery and ornate:

COLONEL E. L. DRAKE
DIED AT BETHLEHEM, PA., NOV. 8, MDCCLXXX
FOUNDER OF THE PETROLEUM INDUSTRY.
THE FRIEND OF MAN.
CALLED BY CIRCUMSTANCES
TO THE SOLUTION OF A GREAT MINING PROBLEM
HE TRIUMPHANTLY VINDICATED AMERICAN SKILL
AND NEAR THIS SPOT
LAID THE FOUNDATION OF AN INDUSTRY
THAT HAS ENRICHED THE STATE
BENEFITTED MANKIND
STIMULATED THE MECHANICAL ARTS
ENLARGED THE PHARMOCOPOEIA
AND HAS ATTAINED WORLDWIDE PROPORTIONS
HE SOUGHT FOR HIMSELF
NOT WEALTH NOR SOCIAL POSITION
CONTENT TO LET OTHERS FOLLOW WHERE HE LED
AT THE THRESHOLD OF HIS FAME HE RETIRED
TO END HIS DAYS IN QUIET PURSUITS.
HIS GREATEST AMBITION
WAS THE SUCCESSFUL ACCOMPLISHMENT OF HIS TASK
HIS NOBLE VICTORY, THE CONQUEST OF THE ROCK
BEQUEATHING TO POSTERITY
THE FRUITS OF HIS LABOR AND OF HIS INDUSTRY.
HIS LAST DAYS
OPPRESSED BY ILLS
TO WANT NO STRANGER
HE DIED IN COMPARATIVE OBSCURITY.

Flowery and ornate — and not entirely in keeping with the facts. Drake was no hero to those who knew him well!

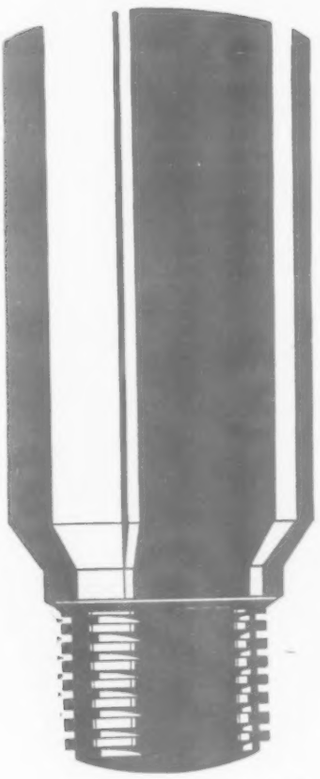
And at the base of the memorial all that is mortal of Drake sleeps serenely. Fate never selected a more unusual instrument. A colonel by courtesy only — his only battalions were mostly bitter thoughts, undisciplined troops of vague ideas regarding his status. He tapped the richest mine the world has ever known — and died a ward of the state.

For years after the memorial was dedicated the identity of the donor remained a mystery. But the panel to the left of the monument remained smooth and unadorned with chiseled letters. Then, following the death of Henry H. Rogers, workmen appeared and with sharp chisels put this on that vacant panel:

"This monument is erected by Henry H. Rogers in grateful recognition and remembrance."

And it was thus that the identity of the donor became known.

Meantime the site of the original Drake Well was unmarked, a dismal brush-grown swampy tract of land along Oil Creek, nestling between two hills. The members of Canadato Chapter, Daughters of the American Revolution, of Titusville, decided to do something about



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AN ELLIOTT DEVELOPMENT

The Detachable cutterhead has proved to be one of the most important improvements in core drills. It greatly simplifies coring for the operator in remote districts, far from service facilities, and enables him to core as efficiently and economically as the operator who has every shop, factory and field service immediately available. It eliminates the expense and bother of building up worn cutterheads, with the necessary investment in equipment and labor.

Like the core drill itself, and practically all worth-while core drill improvements, the detachable cutterhead is an Elliott development. In all fields Elliott is recognized as the pioneer and leader in the coring of oil wells.

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ELLIOTT Core Drills

it. The result was something pleasing, fitting and in complete harmony with the surroundings. Their memorial consists of a great native boulder moved with considerable difficulty and erected staunchly at the site of the historic well. On the face of this boulder is placed a copper plate with a bas-relief of the derrick that once stood there and below is the following simple and dignified inscription:

"This native boulder marks the spot where, through the foresight, energy, and persistence of Edwin L. Drake, the first well was drilled for oil. On August 27, 1859, oil was found at a depth of 69 feet. This great discovery inaugurated the petroleum industry. Erected by Canadato Chapter, D. A. R., August 27, 1914."

It is a splendid and fitting memorial. At the right of the boulder the iron throat of the old drive pipe stands a few inches above the ground. The monument, sad to say, has been seriously defaced by vandals who have carved their initials on the stone. It has been necessary to place a heavy screen over the copper plate to protect it.

It is a quiet spot; the trees whisper endlessly; birds twitter gently and old Oil Creek, a stone's throw away, glides along on its graveled bed, bubbling an endless but merry tune. And not three hundred yards away one may always hear the complaining squeak of a pumping jack industriously bobbing up and down and a little further away the yelp of a busy little gas engine reminds us that this acreage is still an oil field.

Down below Houseville, toward Oil City, the Lakes-to-the-Sea Highway swerves sharply across Oil Creek. Time was when this district between the hills was a hustling, teeming area. Once the flats were the property of one Chief Cornplanter of the tribe of Indians of that name. This Cornplanter was a curious individual: a half-breed of French extraction who insisted that his name was John O'Bail. The land is still locally known as "O'Bail's Flats"—no one ever heard of famed Chief Cornplanter.

But here at McClintockville is a point of interest—of vital interest. A billboard shouts the information:

"MCCLINTOCKVILLE
OLDEST PUMPING WELL IN THE WORLD
ACROSS R. R. TRACK.
FAMOUS OIL SPRING
Below Center Pier of Bridge—
Discovered by Early French Explorers—Oil Used by Indians
for War Paint & Early Settlers
for Medicine & Lubrication.

Crossing the railroad track one finds the oldest well. The old pumping jack proudly prances up and down. The lead-line shows a trickle of oil and water. That's all! The day I visited the site I could garner no further information. Who owns the well? When was it drilled and by whom? Points of interest! A mystery! Someday I must secure this information. But the sign says the well is the oldest; I have never heard the point disputed. Therefore it must be true! Some of these wells here in the Pennsylvania field live a long time—I remember one well on the lease of S. Q. Wilson at Pleasantville that has been a steady producer for over 55 years. Let not the producer in the Mid-Continent field become consumed with envy at this information in regard to the longevity of Pennsylvania wells—let him consider the comforting truth that the average production in this field is less than one-eighth of a barrel a day per well.

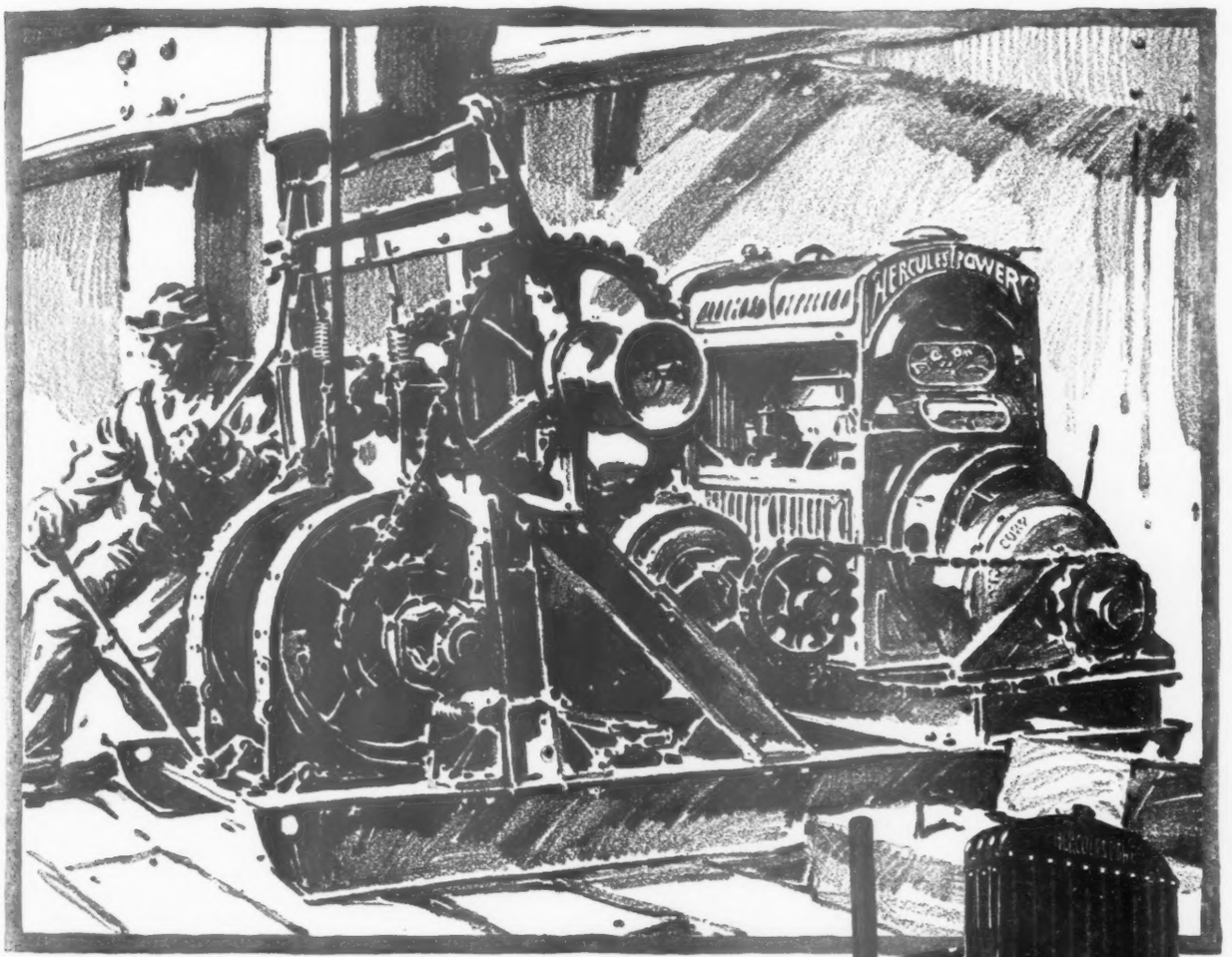
At McClintockville one might keep right on the west side of Oil Creek and after traveling a mile or so up the creek and over a very indifferent road—and eventually one might arrive in front of a neat little white cottage on a side hill. Back of the cottage the green woods sweep over the crest of the hill in unbroken monotony. It is a small place, yet a comfortable little place. From the front porch one can see for miles down the valley: down below Oil Creek wanders through the flat-lands like a silver thread; the smoke of the refineries of Rouseville smudge the sky and further south Oil City's refineries add their bit and if one could see a little further one could see the smoke of the refineries at Franklin. In every direction there is ample evidence of oil and things connected with oil. Rod lines run hither and yon like spider webs. Here and there are power houses and the steady bark of gas engines—natural gasoline plants housed in gleaming galvanized iron shells and over here the white plume of steam that shows that a new well is being drilled. Here we have one of the most productive and one of the richest of the Pennsylvania oil fields—and one of the oldest. And in this little house once dwelt a sullen youth named John Steel. It was in this house that his aunt burned to death. And John Steel, her ward and nephew, whom she had forced to labor daily at hauling oil while she accumulated a large fortune from her oil-bearing lands and leases, proceeded to spend that fortune so unwisely and in such a spectacular manner that he became known far and wide as "Coal Oil Johnny." Little house of memories: bitter memories exultant memories—little house where queer and unexplainable complexes were bred—and died. The little house to which a repentant, penniless John Steel returned to a faithful, splendid wife he had deserted for the fleshpots. Little house where John Steel swore his eternal allegiance to work, industry and honor—a vow never broken.

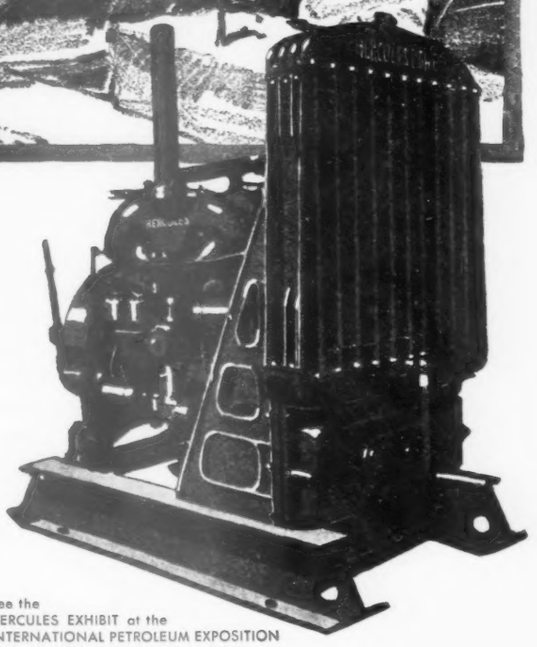
Pithole City is gone. Almost! Where thirty thousand souls labored, struggled, fought, loved, is now wilderness and a land dotted with innocent little dimples in the land's surface that indicate where cellars once existed. Land where acreage once commanded prices that even today warrant our respect. The first and the most wicked oil town the world has ever known—from nothing to thirty thousand in a little over a year.

The only existing building of that mad, sad, merry boom oil town, is an old church. No services are held there any more. Inside is mould and desolation; the walls are covered with the names of visitors hastily scribbled. Perhaps on dark nights the ghosts and spirits of godly men and women return to that gaunt, bleak old building on the hill-top and hold a reunion. Possibly the sound that natives hear and ascribe to the wind whistling and moaning through the broken windows is only the ghost of a once lusty Methodist hymn as it is being sung by the spirits of the good men and women who caused the church to be erected. Possibly even the timid voice of the unregenerate gambler whose donation made the building of the church possible joins in. It wouldn't be entirely fair or just to think that he wasn't welcome...

There's something a bit sad about visiting these memorials. Yet they are the only tangible records we have of the brave old days when history was in the making

LUCEY PORTABLE DRAW WORKS POWERED BY HERCULES UNIT





On cable or rotary drills, spudders, slush pumps or winches Hercules Engines meet exacting oil-field requirements. Hercules Engines and Oil Field Units are specially built for day-in-day-out service. And they are found wherever absolute dependability is essential—in Roumania, for example, where the Hercules-Powered Lucey 4″ Portable Draw Works shown above is operating. Four and Six cylinder models are available—from 9 to 175 H. P.

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See the HERCULES EXHIBIT at the INTERNATIONAL PETROLEUM EXPOSITION at TULSA, Okla., October 4th to 11th.

HERCULES ENGINES

Fuel Oil and Natural Gas Consumed by Power Plants, Increased in May

Washington, D. C.—Consumption of fuel oil and natural gas by public utility power plants during May, 1930, increased, according to a report issued by the Bureau of Mines. Fuel oil consumption in May aggregated 607,450 barrels, against 591,327 barrels in April. Natural gas consumption in May aggregated 9,631,958,000 cubic feet, against 9,560,133,000 cubic feet in April. States showing a gain in fuel oil consumption during May were Maine, New Hampshire, Massachusetts, New York, Michigan, Iowa, Missouri, South Dakota, Delaware, Maryland, Virginia, West Virginia, North Carolina, Florida, Alabama, Arkansas, Oklahoma, Texas, Montana, Idaho, Arizona, Washington and Oregon. All natural gas consuming states except West Virginia, Louisiana, Oklahoma, Wyoming and California reported increased demand.

Value of Refined Oil Exports Lower

Washington, D. C.—According to the Department of Commerce, exports of refined oils from the United States commanded a lower monetary value for the six months ended June 30, 1930, compared with the same period of last year. Value of crude exported, however, showed a moderate gain over last year. Following is a summary of the figures, as shown in the Department of Commerce report:

Exports of Crude and Refined Products

First six months of 1929 and 1930:

	1929	1930
Crude (barrels)	11,515,972	12,092,155
Crude (value)	$15,446,512	$16,497,315
Refined oils (barrels)	60,974,209	65,472,475
Refined oils (value)	$242,750,620	$241,456,072

Magnolia Withdraws 337,680 Barrels From Storage in July

Dallas, Texas.—Heavy reductions in crude production and purchases sustained by Magnolia Petroleum Company in Oklahoma fields during July is reflected in the company's withdrawal of 337,680 barrels of oil from storage held in the state for the month. This pull on storage averaged 10,893 barrels daily, while during June the company added to storage in Oklahoma at the rate of 1026 barrels daily. At the close of July Magnolia Petroleum Company was credited with having 6,549,846 barrels of oil in steel tanks in Oklahoma. Application of more rigid proration restrictions, and adherence to a policy of holding drilling operations at a low level are two major factors behind the company's loss in crude takings from Oklahoma fields. During July Magnolia Pipe Line Company handled a daily average of 46,511 barrels for Magnolia Petroleum Company in this state, as compared to a daily average of 56,356 barrels maintained during the previous month. These figures represent oil production and purchases made by the company, but do not include crude handled on a common carrier basis by Magnolia Pipe Line Company for other interests.

Decreased crude runs from Oklahoma fields by Magnolia Pipe Line Company were partially offset by increases from Texas fields. The company averaged 96,941 barrels daily during July from fields in Oklahoma, Texas, Louisiana and Arkansas, as compared to an average of 104,603 barrels daily for June, with the decline in Oklahoma partly offset by runs from Texas increasing from 41,537 to 42,965 barrels daily average. A breakdown of proration restrictions in the Darst Creek field late in July resulted in Magnolia Pipe Line Company's runs reaching a high mark of 6038 barrels daily average for the month, as compared to a daily average of 3638 barrels during June.

Tanker shipments of crude, fuel oil and refined products made from Beaumont terminals by Magnolia Petroleum Company during July registered a loss in volume. Crude shipments totalled 636,723 barrels during the month, as compared to 789,971 barrels in June, while fuel oil movement decreased from 19,394,962 gallons in June to 11,387,839 gallons in July. Water shipments of refined products amounted to 40,416,983 gallons in July, representing a decline of 13,336,957 gallons when compared to June movement of the same commodity.

Total crude runs made by Magnolia Pipe Line Company, exclusive of common carrier business, from fields in Oklahoma, Texas, Louisiana and Arkansas during June and July, 1930, follow:

Fields—	June	July
Wewoka-Cromwell	463,128	393,829
Oklahoma City	368,288	265,407
Healdton	215,829	227,873
Cushing	255,254	183,277
Wewoka (Bright Stock)	149,700	139,484
Hewitt-Graham	125,587	125,157
Duncan-Walters	39,631	39,828
Yale	37,989	37,713
Seminole	35,263	29,288
Total	1,690,669	1,441,856
Luling District	254,285	265,006
Panhandle District	244,185	209,590
Mirando District	172,807	206,570
Darst Creek	109,153	187,168
Electra	125,846	123,397
Burkburnett	57,847	60,497
Crane County	83,985	56,512
Winkler County	30,721	50,010
Howard County (Deep)	35,788	38,511
Lockhart-Lytton Springs	29,310	30,756
Archer County	20,071	20,245
Mexia-Wortham	17,308	17,614
Desdemona-Comanche Co.	14,752	14,297
Iatan & Howard County	11,702	12,631
Corsicana-Powell	11,963	11,747
Corsicana (Heavy)	8,397	8,388
Stephens County	7,161	7,622
Ranger-Olden	7,304	6,803
Panola County	815	1,853
Petrolia-Clay County	1,477	1,470
Thrall-Williamson County	1,227	1,241
Total	1,246,104	1,331,928
Hackberry	23,801	57,736
Bull Bayou	30,572	31,383
Cotton Valley	23,636	24,374
Pine Island	22,977	21,670
Haynesville	4,655	4,878
Total	105,641	140,041
Smackover	55,005	54,230
El Dorado-Rainbow	37,240	33,824
East El Dorado	3,445	3,289
Total	95,690	91,343
Totals for all states	3,138,104	3,005,168

New York, N. Y.—The twelfth annual convention of the American Gas Association and exhibition will be held October 13-17, inclusive, at the Atlantic City Auditorium, Atlantic City, New Jersey.

Tentative program indicates that natural gas will be accorded a major part in the business sessions. Development of natural gas in recent times having been recognized as the outstanding topic of interest to gas men everywhere has centered attention upon numerous problems of the industry that are of paramount importance to its future development. As a result, this year's gas convention will be devoted largely to papers and discussions pertaining to the natural gas industry. The program promises to be of such interest as to insure a large attendance of natural gas men from all parts of the United States and Canada.

Like the big Halliburton trucks, the Supervisors' cars are kept in perfect condition in Halliburton's shops—always ready to "get there somehow."

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Benavides, Texas
Borger, Texas
Wink, Texas

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

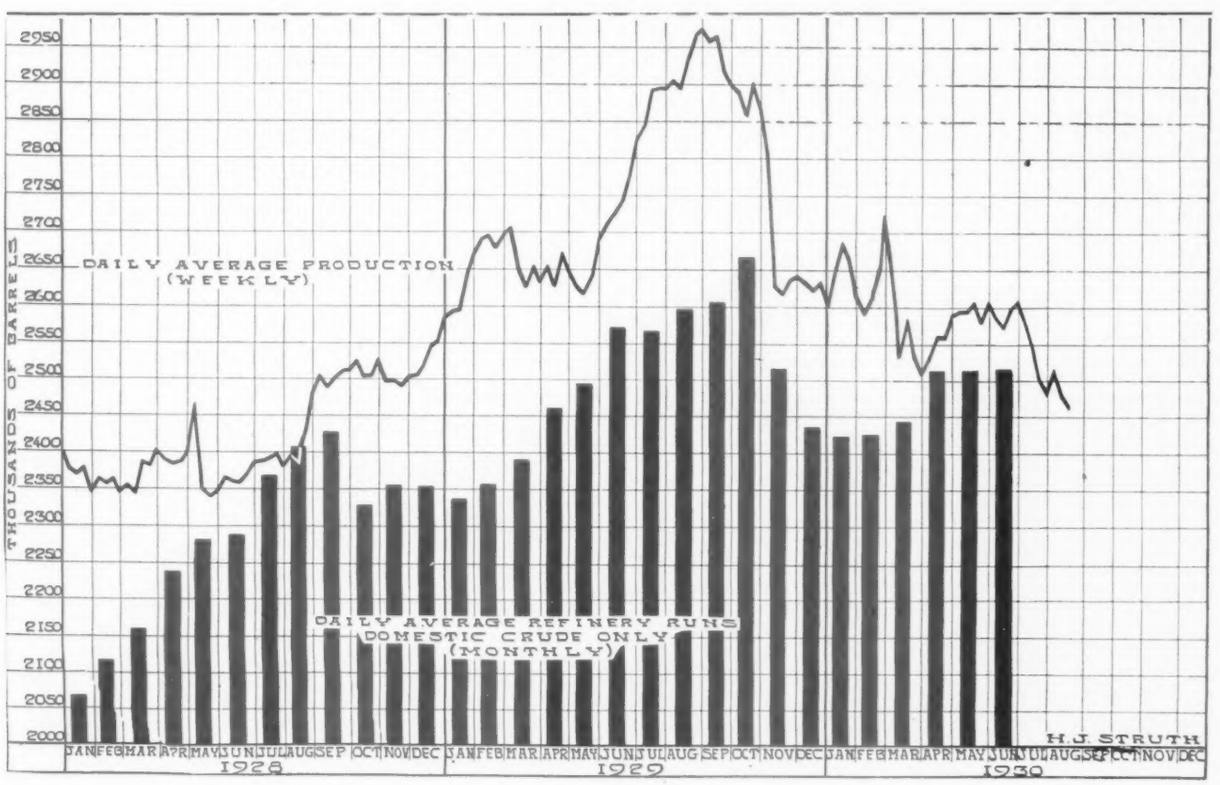
Oklahoma City Producers Threaten State Proration Program

A SHARP decline in production at Oklahoma City last week brought production of the state down to a point somewhat below prescribed limits and materially aided in bringing the national daily average crude production toward the goal established as normal. As a result, the total daily average crude output of the United States receded to 2,463,550 barrels, a net decline for the week of 16,650 barrels.

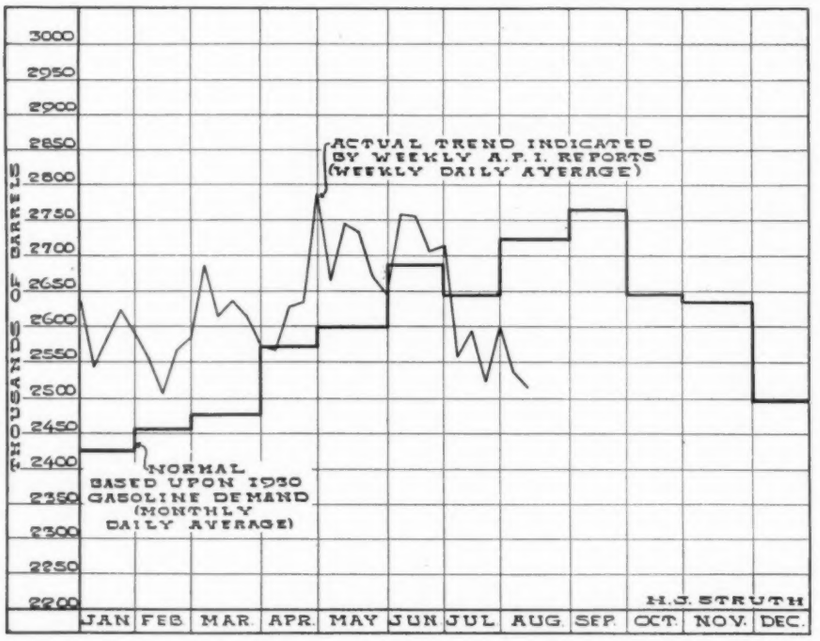
Oklahoma, Kansas, North Louisiana, Arkansas, Eastern States and Rocky Mountain states reported declines in production last week, but Texas, California and the Gulf Coast were charged with a combined gain in production of 15,350 barrels. A check of detailed production in Texas by fields showed, however, that the American Petroleum Institute figures now include the Chapman field, which had been overlooked in previous reports. Since this field accounts for a gain in Texas production figures of 10,000 barrels a day, it is seen that there was really not a material increase in Texas over the preceding week. California production figures are beginning to reflect the activity at Playa del Rey; the gain reported for last week amounting to 4200 barrels.

The most important development of the week was the announcement by the Texas Railroad Commission to the effect that proration would be inaugurated on August 27. The limit for the state has been placed at 750,000 barrels

DOMESTIC PRODUCTION AND REFINERY RUNS



RUNS OF CRUDE OIL TO STILLS



daily, or 82,200 barrels below the total actually produced during the week ending August 16. This is welcome news to the industry and strengthens the belief that stabilization is within easy grasp. As the situation appeared on August 16, it will be necessary for the industry to reduce crude production by at least another 120,000 barrels in order to wipe out the excesses of the preceding 7½ months. If Texas operators carry out their professed willingness to curtail to the limit prescribed for the various fields of the state, this excess will shortly be reduced to an insignificant figure.

The latest reduction in crude production in Oklahoma has brought the total for the state 11,800 barrels below the limit set. Kansas is still about 9000 barrels a day above normal requirements, although the reductions brought about in the Voshell pool have materially aided the situation there.

Threaten Oklahoma Program

Threats of a disruption in the Oklahoma crude production curtailment program hung over a meeting of the proration committee of the Mid-Continent Oil & Gas Association Tuesday. The committee met to draft a proration schedule for September.

Although the majority vote favored continuing with a 550,000-barrel daily output for the state, the trend of discussion was such that opposition seems certain, both prior to drafting the petition and at whatever date it is taken before the corporation commission for conversion into an order.

Dissatisfaction on proration came out of the Oklahoma City field. Wirt Franklin sent a message in which he requested that the committee so arrange its program that the Oklahoma City field could have 160,000 barrels daily output. He intimated that failure to revise the Oklahoma City field upward would result in his decision to go before the corporation commission and oppose the program.

Then A. V. Hoenig, vice president of Indian Territory Illuminating Oil Company, expressed the opinion that failure to raise the output for the Oklahoma City field would result in opposition to the proration schedule from producers in the field. He recommended that the settled production of the state, which ran close to 260,000 barrels daily in July, be cut 25 per cent and that this 65,000 barrels daily be added to the Oklahoma City output. He made it clear that he was expressing what he considered the attitude of

CRUDE RUNS TO STILLS, GASOLINE AND GAS AND FUEL OIL STOCKS, WEEK ENDING AUGUST 9, 1930

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting		Crude Runs to Stills			Gasoline Stocks	Gas & Fuel Oil Stocks
		Total	Per Cent	Total	Daily Average	Per Cent Operated		
East Coast	608,700	608,700	100.0	3,384,000	483,400	79.4	6,549,000	10,147,000
Appalachian	128,100	117,600	91.8	585,000	83,600	71.1	1,451,000	1,046,000
Indiana, Illinois, Kentucky	382,500	381,000	99.6	2,073,000	296,200	77.7	6,777,000	4,396,000
Oklahoma, Kansas, Missouri	462,200	415,700	89.9	1,893,000	270,400	65.1	3,485,000	4,786,000
Texas	788,000	712,700	90.4	3,850,000	550,000	77.2	6,595,000	10,192,000
Louisiana-Arkansas	270,600	262,000	96.8	1,127,000	161,000	61.5	1,501,000	1,779,000
Rocky Mountain	148,900	139,300	93.6	384,000	54,900	39.4	2,301,000	1,218,000
California	879,400	891,400	99.3	3,767,000	538,100	60.4	14,070,000	105,678,000
Total Week Aug. 9	3,686,400	3,528,400	95.7	17,063,000	2,437,600	69.1	42,729,000	139,242,000
Total Week Aug. 2	3,686,400	3,528,400	95.7	17,197,000	2,456,700	69.6	44,100,000	139,641,000
The Total U. S. Figures for Last Year, Shown Immediately Below, are not Comparable with This Week's Totals because of Difference in Percentage Capacity Reporting								
Total August 10, 1929	3,339,700	3,069,200	91.9	18,298,000	2,613,900	85.2	*34,021,000	*138,919,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included in the Totals of Their Respective Districts.								
Texas Gulf Coast	526,500	526,500	100.0	3,036,000	433,700	82.4	5,338,000	7,114,000
Louisiana Gulf Coast	147,500	147,500	100.0	819,000	117,000	79.3	1,171,000	983,000

*Final Revised 1929.

Oklahoma City producers, rather than his own opinion or the position of his company, which is the major producer of the field. He said he felt that the only basis upon which proration could be continued in Oklahoma was by making the schedule fair as regards the several classes of oil fields. He estimated that the potential output of Oklahoma City by September would be 1,967,000 barrels. Against this he pointed out that only 80,000 barrels could be produced.

Against these proposals, however, purchasing concerns stood firm in their position that regardless of what figure may be set for Oklahoma City, the buyers will not take much more oil than they now take, regardless of price.

R. M. Young, president of Carter Oil Company, said that the position of major buyers was such that they desired to reduce purchases and that any proration in settled production would not be converted into equal increase for Oklahoma City, for pipe line facilities would not be altered to allow the oil to be run.

"You cannot sell oil at Oklahoma City if nobody wants it," was one of Young's replies to the suggestion that the output of that field be increased. It was evident that major purchasers desire to decrease purchases, rather than to increase them in any area.

Another opposition to a reduction in settled fields to give added output to Oklahoma City was that several major pipe line as well as numerous smaller ones have no facilities at Oklahoma City. If more drastic curtailment were put in effect elsewhere, these buyers could not turn to Oklahoma City but would make up requirements out of storage.

Price Reduction Talked

The question of price came into the discussion and it was evident that lower prices are feared, should Oklahoma City producers decline to accept the proration schedule. Wall Street financial dispatches early this week were to the effect that Mid-Continent prices are in danger of reduction.

The decision of the Mid-Continent proration committee Tuesday was to seek an extension of the order from the corporation commission, which will keep Oklahoma production at 550,000 barrels daily through September. Of this, Oklahoma City will be allowed but 88,900 barrels. Another provision, not in previous petition, will be that any wildcat well completed in Oklahoma be immediately pinched to 50 barrels a day.

Before the work of the committee goes before the corporation commission, there will be meetings of producers. Oklahoma City producers met August 21 in Oklahoma City. The following day, a statewide meeting was called for Oklahoma City. Both of these meetings took up the schedule of the committee.

Both at Oklahoma City and at Tulsa, the open meetings seemed destined to meet opposition from Oklahoma City producers.

The major fight, however, is expected to come when the committee recommendation is put in petition form and taken before the corporation commission. At that time the petition likely will be opposed as discriminatory against that field.

Pennsylvania Acting

Pennsylvania operators, determined to balance supply with demand, met at Franklin, on August 19, at which time

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

	Necessary Daily Average 3rd Quarter 1930	Quota Limit Prescribed to Correct Previous Excesses	Actual Daily Average Week Ending August 16, 1930	Excess
Arkansas	62,431	62,431	55,450	—6,981
California	664,149	594,000	620,300	26,300
Kansas	120,222	105,554	114,400	8,846
Louisiana	60,116	58,749	71,000	12,251
Oklahoma	669,115	550,000	538,200	—11,800
Texas	839,361	750,000*	832,200	82,200
Balance of U. S.	230,000	230,000	232,000	2,000
Total	2,645,394	2,343,607	2,463,550	119,943

*Limit set by R. R. Commission beginning August 27.

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

(Barrels of 42 gallons)

	Week Ended August 9	Week Ended August 2
AT ATLANTIC COAST PORTS—		
Baltimore	388,000	402,000
Boston	73,000	.....
New York	818,000	1,339,000
Philadelphia	33,000	265,000
Others	105,000	302,000
Total	1,417,000	2,308,000
Daily Average	202,428	329,714
AT GULF COAST PORTS—		
Galveston District	68,000	.....
New Orleans & Baton Rouge	80,000	15,000
Port Arthur & Sabine District	.....	.....
Tampa	.....	.....
Total	148,000	15,000
Daily Average	21,143	2,143
AT ALL UNITED STATES PORTS—		
Total	1,565,000	2,323,000
Daily Average	223,571	331,857
Daily Average Four Weeks Ended	288,071	315,179
Distribution of Total Imports is as Follows:		
Crude	967,000	1,428,000
Gasoline	293,000	340,000
Fuel Oil	305,000	555,000
Total	1,565,000	2,323,000

CALIFORNIA OIL RECEIPTS AT ATLANTIC AND GULF COAST PORTS

(Barrels of 42 gallons)

	Week Ended August 9	Week Ended August 2
AT ATLANTIC COAST PORTS—		
Baltimore	.....	.....
Boston	81,000	48,000
New York	483,000	339,000
Philadelphia	163,000	232,000
Others	51,000	167,000
Total	778,000	786,000
Daily Average	111,143	112,286
AT GULF COAST PORTS—		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC & GULF COAST PORTS—		
Total	778,000	786,000
Daily Average	111,143	112,286
Daily Average Four Weeks Ended	110,571	98,893
Distribution of Total California Receipts is as Follows:		
Gasoline	433,000	686,000
Gas Oil	265,000	.....
Fuel Oil	80,000	92,000
Lubricants	.....	8,000
Total	778,000	786,000

Weekly Comparison of Permits Granted for New Wells

States—	Week Ending Aug 16	Previous week	This week 1929	Total this month	This month 1929	Total this year	Total this date last year	1929 year total
Arkansas	1	..	3	4	12	64	98	159
California	22	17	30	57	62	528	843	1,231
Louisiana	10	22	16	51	51	679	541	903
Kansas	33	13	26	63	86	690	708	1,079
Oklahoma	53	51	79	134	254	2,114	2,188	3,578
Texas	122	89	197	314	589	5,133	5,561	8,697
Total	241	283	351	623	1,054	10,262	9,939	15,647

definite steps were taken to establish production limits for Vanango, Clarion, Crawford, Forest and Mercer Counties. The meeting was held under the auspices of the Pennsylvania Oil and Gas Men's Association. The long series of price declines in the Pennsylvania crude market have apparently had little effect upon the over-production condition that exists there and it is believed that the results of the recent meeting will have a favorable effect upon the situation in the near future.

The Texas Pipe Line Company and Shell Pipe Line Company are rushing construction of about 20 miles of line into the new Hobbs, New Mexico, area. Drilling activity in this area is approaching the peak level and it is expected that this point will have been reached by the end of this month. Numerous unusually large wells have been completed at Hobbs during the past two weeks and the potential of this field has been considerably augmented. Proration agreements have been effective in maintaining a steady rate of production. What will happen when additional pipe line outlets are made available is problematical, as the type of crude being produced there is of such quality as to place it in favorable demand.

A late check of Texas production shows that the present excess amounts to 82,200 barrels daily. All eyes will be centered on Texas on and after August 27 to watch with keen interest the result of the Texas Railroad Commission's proration order. That there will be an immediate decline of at least 45,000 barrels a day seems to be assured by the spirit manifested by operators from practically all sections of the state. Opposition to the curtailment order voiced by operators in the Gulf Coast, Southwest Texas and the University Lands of West Texas is expected to be ironed out at the hearing to be held in Austin on August 25. Whatever the outcome of this hearing is, it is certain that at least a major part of the contemplated reductions in production in the areas under question will be made.

Independent refiners with plants at interior points in Texas are likely to be deprived of their bountiful supply of distressed price crude as result of the forthcoming state-wide proration order of the Texas Railroad Commission. These plant owners have had select grades of crude offered by producers in need of pipe line and market outlets at prices amounting to as much as 25 cents per barrel below posted schedules. Thousands of barrels of Panhandle crude have been moving in tank cars each month through brokers that paid producers less than posted prices, but the latter will now be able to attract direct pipe line connections under the terms of the law and receive posted prices. Offers of

(Continued on page 74)

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	9	4	5	1	2	..	2	3	675	30
California	31	16	27	13	..	..	4	3	22,290	9,400
Illinois	3	5	2	..	..	..	1	5	8	..
Indiana	3	5	..	2	1	1	2	2	..	65
Kansas	17	13	8	9	3	..	6	4	5,170	3,355
Kentucky	31	22	16	14	7	2	8	6	1,280	795
Louisiana	33	21	7	7	8	6	18	8	2,390	4,206
Michigan	4	2	..	2	..	..	4	..	..	400
Mississippi	1	2	..	..	..	2	1	..	..	..
Missouri	..	..	..	..	..	..	..	..	..	..
New Mexico	11	3	10	1	..	..	1	2	103,645	11,080
Ohio	34	30	13	11	13	10	8	9	258	449
Oklahoma	71	74	48	40	5	7	18	27	202,413	163,301
Pennsylvania	9	44	3	13	5	17	1	14	29	95
Texas	102	140	48	64	13	12	41	64	44,217	43,158
West Virginia	12	..	1	..	8	..	3	..	4	..
Total	371	381	188	177	65	57	118	147	382,379	236,334
Increase this week	..	..	11	..	8	..	..	..	146,045	..
Decrease this week	10	..	..	..	..	..	29	..	..	..

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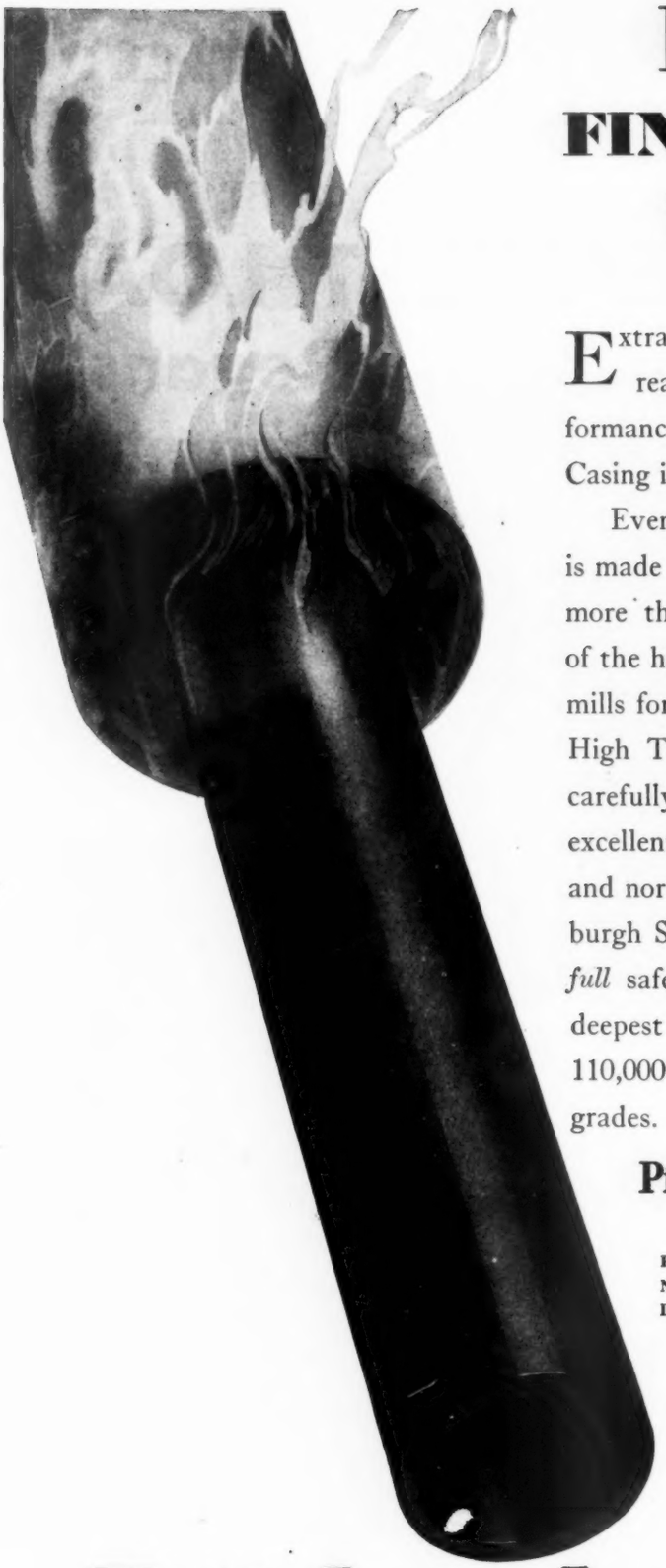

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PERSONAL MENTION-MEN YOU KNOW

D. J. **Moran**, president, **E. J. Nicklos**, vice-president in charge of production, and E. S. Karstedt, vice-president in charge of marketing, of Continental Oil Company, with headquarters at Ponca City, Oklahoma, have concluded a short inspection of the company's properties in California, using a trimotored monoplane to complete the trip with the least possible delay. The principal trip included a visit to Kettleman Hills, where the company has large holdings.

H. U. Durant, for several years plant superintendent for the Baker Iron Works, died at the California Lutheran hospital, Los Angeles, August 7, following an illness of several weeks.

J. H. Pressley, manager land department in southwest division for Sun Oil Company with headquarters at Dallas, departed last week on a vacation trip to Mobile, Alabama, and other Gulf Coast points.

P. P. Bunton, formerly field superintendent for The Texas Company in the Lockhart-Lytton Springs field, Texas, has resigned to accept a similar position with Sequoia Oil Company, which is the largest oil producer in the Chapman field, Texas. Bunton is making his home at Taylor, Texas.

J. W. Stanford has been elected president and a member of the board of directors of the America-Maracaibo Company, which operates in Venezuela and Columbia, and also has producing properties in Texas and Oklahoma. Stanford was formerly with Sinclair Consolidated Oil Corporation. Another vacancy on the board was filled by the election of George Armsby, vice-president of Bancamerica Blair Corporation.

Harry Thrailkill, district manager for Continental Supply Company in the Gulf Coast and Southwest Texas territory, headquarters at Houston, left for Ohio about the middle of August, accompanied by Mrs. Thrailkill, for the annual vacation.

W. W. Wilson, vice president in charge of manufacturing of the Byron Jackson Company, is taking a three weeks' pleasure trip in Mexico.

Bob Cook, sales manager for Byron Jackson Company, recently returned to Los Angeles from a trip to Bakersfield and Taft, returning by way of Ventura. His journey was marred by an attack of ptomaine poisoning, from which he has not fully recovered.

Thomas B. Slick, prominent Mid-Continent oil operator, died August 17 at Baltimore, Maryland, where he had been a patient at Johns-Hopkins hospital since June 27. His career started in Pennsylvania, but coming to Chanute, Kansas, as a young man he quickly became a millionaire and climaxed his success, despite some reverses in the meantime, when he sold

THOMAS B. SLICK
Death closed a colorful career.

his holdings in 1929 to Prairie Oil & Gas Company for thirty odd million dollars. Again entering production, his activities in Oklahoma were extensive and successful at the time of his death. He maintained his home at Clarion, Pennsylvania, but spent much of the year at Oklahoma City and at San Antonio, Texas, at each of which places he maintained homes. His birthplace was Clarion, and it was from the home of his mother there that he was buried on August 18, the body having been taken there on a special train from Baltimore. Friends from Oklahoma were among those attending the funeral some of them using airplanes to arrive in time. He is survived by his widow, a son, T. B. Slick, Jr., and a daughter, Miss Louise Slick.

W. Armstrong Price has moved his headquarters to Corpus Christi, Texas, to look after the interests of his clients, Saxet Oil Company and Saxet Gas Company. He will retain an office in the Esperson building, Houston, for general consulting practice.

Carl King, Mid-Continent drilling contractor, made a flying visit to Los Angeles in his new eight-place Travelair cabin plane. He brought with him as a passenger on the week-end trip, C. F. Vincent, Byron Jackson Company representative in Oklahoma.

J. B. McMahon, formerly Tulsa branch manager of the Foxboro Company, will hereafter make his headquarters at the home office at Foxboro, Massachusetts. He has taken charge of all field engineering service and is in charge of direct sales. G. B. Lane, formerly manager of the Detroit office, has succeeded McMahon as branch manager at Tulsa.

George M. Bevier, chief geologist in the Gulf Coast territory for Pure Oil Company for the past five years, has resigned to do consulting geophysical work. Since 1925 he has specialized in seismograph interpretation in his connection with Pure Oil Company. Mr. Bevier was graduated in geology from the University of Pittsburgh, class of 1913, and for the following two years was assistant geologist of Pennsylvania. From 1916 to 1918 he served Sinclair Oil Company in Central America, doing geological work. In 1918 he became a sergeant in the oil and lubrication branch, Department of Military Aeronautics, Washington, D. C., where he served a year. He joined Atlantic Oil Producing Company as chief geologist in the Gulf Coast in 1920, and served four years, after which he did research work at the Bureau of Standards, Washington, D. C., and did experimental field work in Mexico and the Gulf Coast and Mexico with McCollum Exploration Company. He has an especially wide knowledge of geophysical and geological conditions in the Gulf Coast.

K. T. Penick, vice-president, Oil Center Tool Company, Houston, is spending two weeks in El Paso, Texas, and New Mexico, on an annual vacation. The Oil Center Tool Company plant was put on a 24-hour day working basis recently following the placing on production of several new items of equipment.

M. J. McLaughlin, assistant manager of the production department, Magnolia Petroleum Company, has been elected a director of the company.

William Simpson, manager production department, The California Company in the Texas-New Mexico district with headquarters at Midland, Texas, is spending his vacation with his parents in Indiana.

George Schmidt, president, the Staytite Company, Houston, left late in July, accompanied by Mrs. Schmidt, driving to Virginia and New York on a vacation.

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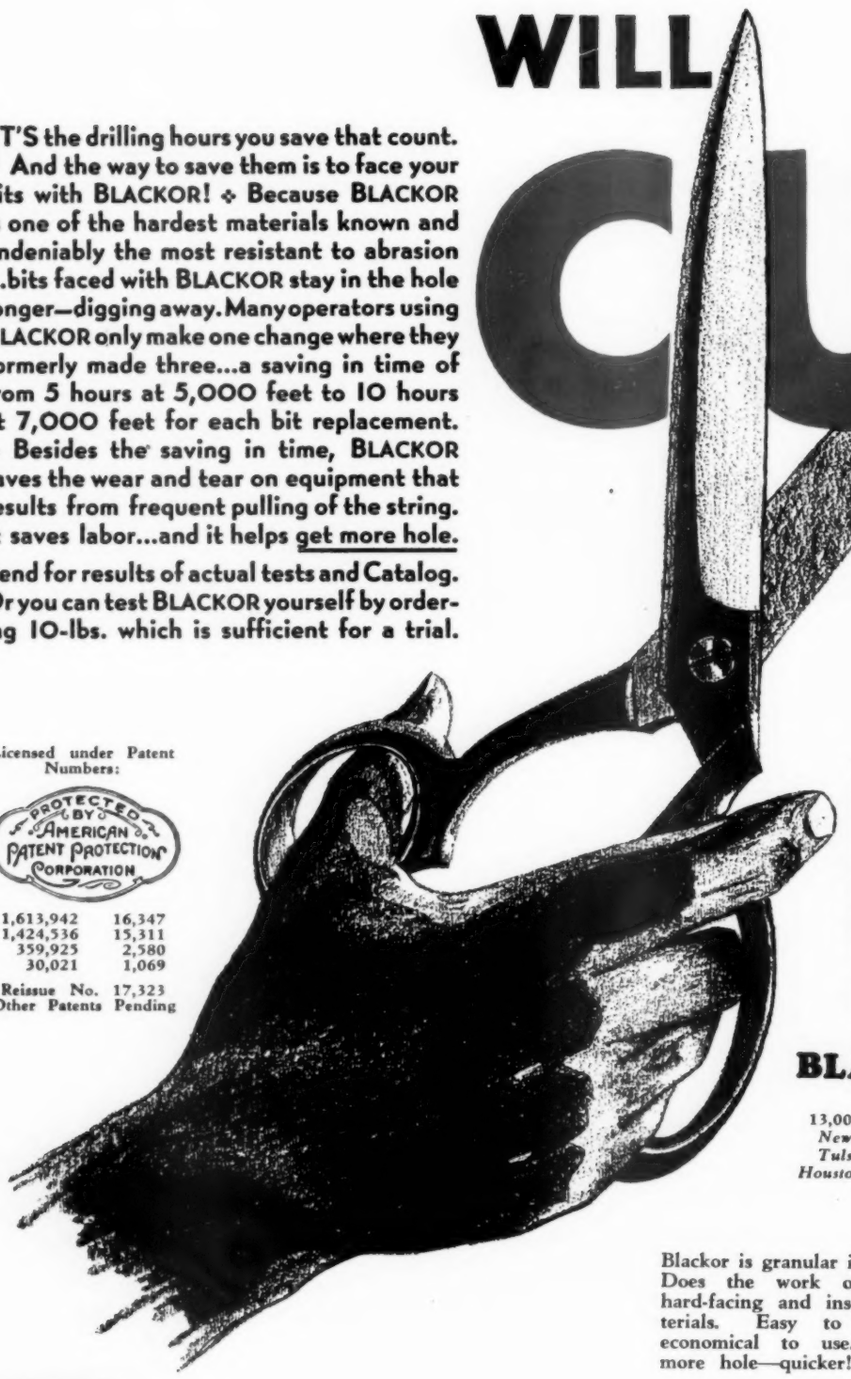

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Oklahoma--Kansas Field Notes

FLOYD L. SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Three Big Wells Added in North End at Oklahoma City

OKLAHOMA CITY.—The northern part of the Oklahoma City pool was the scene of much activity during the week when three large wells were completed on a 10-acre tract, one of which started blowing wild shortly before noon Sunday. T. B. Slick's Page 1, NEc NW Section 14-11n-3w, was completed for 4000 barrels in 20½ hours at a total depth of 6629 feet. Top of Detrital was at 6119 feet with 6⅝-inch casing set 73 feet lower. Julian Oil & Royalty Company's Shepherd 1, SE NE NE NW Section 14-11n-3w, was completed at a depth of 6523 feet and gauged 3452 barrels during the first 18 hours. The same company's Houser 1, NE NE NW Section 14-11n-3w, made an average of 150 to 175 barrels hourly during its initial 24-hour gauge. When shut in it developed a leak and shortly thereafter was blowing wild. This well, although not as large as the famous Mary Sudik 1, was the greatest menace that the field has known due to its location in a congested area and to the fact that it was completed at a time when atmospheric conditions were such as to hold the gas close to the ground. All nearby drilling wells were shut down and traffic barred from Avenue G, the principal east-west thoroughfare through this part of the field. Later the well was under control.

The largest completion for this part of the field was Cromwell-Franklin et al's Trosper Park 25, SE NW SW, Section 12-11n-3w, which produced 480 barrels the first hour and 460 barrels the second from a total depth of 6438 feet.

In the southern part of the field, Indian Territory Illuminating Oil Company completed Sarah Peterson 6, NW SE SW Section 25-11n-3w, for 10,356 barrels in 18 hours 50 minutes at a total depth of 6620 feet in sand. On the extreme south end, Prairie Oil & Gas Company's Vincent Sudik 1, NWc Section 5-10n-2w, was drilling below 6810 feet with nothing showing. This test is the third location east of Continental Oil Company's Sudik 3, NW NE NE Section 6-10n-2w, which was completed early in July for an initial production of 8810 barrels in 8½ hours at a depth of 6692 feet.

Interest has subsided in the wildcat development of Oklahoma County since two of the most closely watched tests have failed to yield more than shows. Prairie Oil & Gas Company-T. B. Slick's Dills 1, C SE NW Section 17-13n-3w, about 12 miles northwest of the Oklahoma City pool, is flowing about 100 barrels of water daily from a total depth of 6821 feet and will be plugged back to shut off water. This is the test that made approximately 500,000 cubic feet of gas and was showing gasoline several weeks ago. Mid-Kansas Oil & Gas Company's Messer 1, SW SW SW Section 32-14n-3w, approximately 2½ miles north of the Prairie-Slick Dills 1 and 4½ miles southwest of Edmond, set nine-inch casing at 6306 feet and was bailed dry after drilling to 6364 feet. It had a show and was reported running structurally higher than the wells in the general area.

Northwestern Oklahoma

Sinclair Oil & Gas Company's Howell 1, C SW SW Section 14-26n-24w, Harper County, was pulling 6⅝-inch casing with 7,000,000 to 10,000,000 cubic feet of gas blowing. The well was originally drilled to 8583 feet, being Okla-

Status Drilling Wells, Oklahoma City Pool, August 16, 1930

Operator—	No. of Locations Rigs or Rigging up	Drilling Above 6000 Ft.	Drilling* Below 6000 Ft.	Waiting on cement Upper Strings	Waiting on Cement 6⅝" or 7"	Shut Down	Total
Indian Territory Illuminating Oil Company	2	29	53	3	17	4	108
Wirt Franklin Petroleum Corporation	2	7	6	.	5	.	20
Coline Oil Company	.	1	2	.	.	.	3
Skelly Oil Company	.	..	4	3	4	.	11
Sinclair Oil & Gas Company	.	2	2	.	1	.	5
Phillips Petroleum Company	4	7	.	2	.	.	13
Slick and Atkinson	.	5	7	1	2	.	15
T. B. Slick	.	7	10	2	3	.	22
Anderson-Pritchard Oil Corporation	3	7	2	6	2	.	20
Cromwell-Franklin and I. T. I. O.	.	7	1	1	.	.	9
Miscellaneous	30	28	11	7	7	3	86
Total	41	100	98	25	41	7	312
Total completed							423
							735

*Includes wells drilling deeper, drilling plugs, and bailing.

homa's deepest test. When no showing was encountered the 6⅝-inch casing was shot at about 5300 feet and it started making gas. Source of the gas is not definitely known but is believed to be from sand at or near 5300 feet. At last report the well was plugged back to 6737 feet.

Three Way Oil Company's Pierce (Grove) 1, SW NW Section 11-1n-18e, Central Meridian, is shut down at 4425 feet after having had gas shows at approximately 2600 and 3300 feet. This test is located about one-half mile north of the town of Range in southeastern Texas County.

Wildcat West of Seminole City Makes Showing Favorable For Production

Tulsa.—In the Greater Seminole area, Amerada Petroleum Corporation Dixie Oil Company's Chase 1, NW NE SW Section 29-9n-6e, about two miles west of Seminole City, is being closely watched. The well is surrounded on three sides by dry holes and is running 50 to 75 feet higher than wells in the east edge of thet East Earlsboro pool. This test indicates a small high and is considered a sure shot for production.

South of Wewoka about six miles, Empire Oil & Refining Company's C. Fish 1, NE SE SE Section 19-7n-8e, is a small well in the Cromwell sand. Eight and one-fourth inch casing was set at 3027 feet in the Wapanucka limestone.

Southern Oklahoma

Proration plans for the Tatums pool, 1s-3w, Carter County, were revised when a committee representing the Southern Oklahoma Oil & Gas Association, met with Ray Collins, state umpire, and representatives of the pipe line companies serving the area. Under the revised plans, wells with a potential of less than 400 barrels will be allowed to produce 50 barrels daily; and those with a potential in excess of 400 barrels will be allowed to produce 100 barrels daily. Operators have the option of taking the 16-day shut-down time before drilling plugs and taking initial gauge or taking the same amount of shut-down after drilling plugs.

Six new locations have been staked and two wells completed during the week in the Tatums area. Magnolia Petroleum Company's James Hooks 1, sw sw ne Section 24-1s-3w, flowed 672 barrels its first 20-hour gauge. The same company's J. B. Brady 1, SW SE SE Section 13-1s-3w, was a disappointment when it flowed only 44 barrels during the 24-hour period ending at 7:00 Saturday morning. Three wells are drilling plugs and bailing and should be added to the list of producers within the next few days.

Commission Authority Due For Court Test at Oklahoma City

Oklahoma City.—Sometime this week the authority that stands behind orders of the Oklahoma Corporation Commission is due for a test. The attorney general of the state has signified his move as that of going into court to ask that C. C. Julian Oil & Royalty Company be placed in receivership. This announcement drew another from C. C. Julian, president of the concern, to the effect that he had never entered any proration agreement and would obey no proration order, so long as oil from his two wells went into his own tanks and pipe lines, for refining in the refinery now being finished by the concern.

Meanwhile both the state and C. C. Julian, as well as other Oklahoma City producers, have had a problem upon which they all agree—that of bringing a second C. C. Julian well under control. The mixup with state authorities came out of the determination of Julian to produce his first well in excess of regulations laid down for the field through an order of the Corporation Commission. The second Julian well, however, broke loose while shut down. It had a break below the master gates and the oil is thought to be coming from between the two casing strings. In this condition, the well was opened and tankage of T. B. Slick, Inc., was offered for storage.

While a wild well at Oklahoma City is no trivial matter, the larger problem just now is the outcome of the controversy between C. C. Julian and the Corporation Commission. This well was completed last week. When it had flowed longer than the one-day cleaning out period, other producers began to make complaints. Otto Bradford, umpire of the field and an agent of the Corporation Commission, failed to get favorable action when he approached officials of the company. The well was shut in after flowing 72 hours.

Meanwhile the attornety general's department had been appealed to and had started its investigation. This reached a point early this week of bringing forth the statement that the case would be taken into court to bring either obeyance of the order of the commission or a receivership for the Julian company.

A statement from C. C. Julian was to the effect that he was ready for the court action. He said the oil he was running went through his own pipe lines and to a refinery, recently constructed by the company and that gasoline made there would be sold through service stations to be provided. A further charge was that there was actually no proration in the Oklahoma field, since several major oil concerns have been violating its provisions.

Andrews County Wildcat Acreage in Deal; May be Next West Texas Field

San Angelo, Texas.—Negotiations are now pending for the sale of an undivided interest in Fuhrman Petorleum Corporation's wildcat gasser on the Ford ranch and surrounding acreage in Andrews County. This area is being touted strongly as the next oil strike for West Texas, and has been the scene of active lease and royalty trading since the wildcat blew in August 4 making 26,000,000 cubic feet of sulphur gas at 4062 to 4068 feet. Tools were lost in the hole on this date, and the well had to be killed with heavy mud before recovering the tools early this week. Deeper drilling was scheduled to start August 18, but work was halted to await the outcome of the deal.

A wide area around the Ford gasser is involved in recent trades, but most of the lease buyers are playing a northwest to southeast trend, extending into Ector County. Humble Oil & Refining Company spent $36,000 in the latter county in buying 800 acres in three tracts from Broderick & Calvert at $45.00 per acre. A number of smaller deals have been made by various companies on the strength of the gas strike made in the upper section of the lime on the Ford test.

Production allowance for the 58 completed wells in the Judkins field, Ector County, declined to 7,000 barrels daily for the last half of August proration period. The field formerly obtained a quota of 10,000 barrels daily, and the cut of 3,000 barrels has brought forth protests from the small operators.

Humble Oil & Refining Company and associates' Kloh 10, lease "D," furnished a surprise completion from an inside location last week by flowing 2250 barrels clean oil on initial test. During this gauge the well was open four hours, flowed via 1½-inch choke the remaining 10 hours. It logged oil saturated lime at 3646 to 3685 feet.

North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

State Proration Added to Unit Control of Van Production

CORSICANA, Texas.—Dual control of oil production from wells in the Van field is to be gained by the introduction of a proration plan that will be enforced by the Texas Railroad Commission within the 5800-acre unitized block of leases as well as on producing leases situated outside the pooled acreage. This prolific oil area will be incorporated in the commission's state-wide proration order that is scheduled to go into effect August 27, and a special set of rules have been drafted to regulate production of oil and gas to confrom with the quota assigned the field. Drilling practices and methods of operating completed wells are also to be regulated in order that the rigid conservation rules now being carried out within the unitized area by Pure Oil Company, unit plan operator, may be applied to non-unitized producing leases.

Sid Young, a veteran operator in the Gulf Coast and Southwest Texas districts, has been selected as umpire for the field. The duties of an umpire in this field will be somewhat similar to those engaged in such work in West Texas prorated fields, with the commission having direct jurisdiction, although the expense incurred is borne ratably on a production basis by operators in the prorated area.

Van field has been assigned a production quota of 27,500 barrels daily, with 25,000 barrels of this amount for the unitized area, while the remaining 2500 barrels will be allotted wells that are completed on lease outside the pooled acreage. However, it is planned to restrict the output of all wells so that oil drainage will be equally distributed over the field, with initial production and pressure readings on tubing and casing gauges partially determining the output.

The unit plan of operation will remain intact with the proration plan in effect, as the latter will deal solely with the regulation of production and enforcement of conservation rules.

Provisions are made for the Pure-Van Pipe Line Company, subsidiary of Pure Oil Company, to share its crude takings and purchases with all operators in the field whether members of the unit plan or not. This arrangement assures an outlet for the production quota earned by independent operators that are drilling, or have reached the derrick stage, on nine separate vacancy strips, or excess tracts of land in proven and semi-proven sections of the field. These operators will be paid the Mid-Continent gravity scale for their crude at the well, as such a price has been posted by Pure Oil Company. Only three of these vacancy lease owners have commenced drilling, while some of the others are tied up with litigation because of questionable title.

Outside Production

Two members of the Van unit plan—Humble Oil & Refining Company and The Texas Company—have developed production outside the unit area, and are making use of the Pure-Van Pipe Line Company's 10-inch carrier as a market outlet, but are restricting the output of the wells to the same daily average as that maintained in the field proper. There are 91 completed wells on the pooled acreage; they averaged 25,000 barrels daily during the past week.

Two more completions in the non-unitized area are due shortly, and both promise to make big producers though having encountered key formations at a high point on the structure. Humble Oil & Refining Company's R. S. Blake 1 was coring into Woodbine sand early this week after drilling out cement plug at 2375 feet, with seven-inch pipe landed on top of sand at 2371 feet. This test is on a direct line between two of the highest wells on structure in the unit and the two northeast extension wells, and logged the Austin chalk horizon at 2264-2327 feet. Pure Oil Company's Ella York 1, an east offset, is also running high structurally, but not equal to the Blake test, and early this week was feeling for top of Woodbine at 2435 feet. Geo. Anderson et al's Sanger (eight-acre strip), encountered top of Pecan chalk at 1565 feet, and early this week was drilling at 1818 feet.

Six completions were made on the Van unit within the past week. No new locations were announced during this period, but rapid progress is being made on developing the 20 locations ordered drilled the week previous. A survey of unit operations early this week shows 15 drilling tests, and a duplicate number of locations that are erecting steel derricks, or setting up rotaries.

Hill & Hill, Fort Worth operators, have erected wooden derrick to drill on their Van townsite lot, 240 feet long and about 17 feet in width. This location is known as Maxfield Heirs 1, and is surrounded by production. Although it is not to be included in the unit plan, the operators have announced that production would be restricted to an even basis with offset drainage.

Pure Oil Company's W. F. Swain 1, (48-acres), located in the northwest corner of the lease and south offset to a producing well on the Brawner farm on the north end of the field, encountered tight sand conditions and made only a light spray of oil with an estimated flow of seven million cubic feet of gas at a total depth of 2930 feet. This well landed 2½-inch tubing to complete in the usual manner. It is the first gasser developed in the field, but may later increase its oil yield.

Sun Oil Company is to make a try for production in the Woodbine sand horizon on its Noonday wildcat block of leases in Smith County, having staked location on the D. McGehee 99.37 acre farm, Section 17, Thomas Quevedo League, or about one mile east of the town of Noonday. The location was made 450 feet west and 150 feet south of the southwest corner of the Mrs. Julia Phillips 55-acre lease.

Sun Oil Company has about 4000 acres in this area, but the block is not solid as Gulf Production Company and The Texas Company hold leases on tracts within the block. Considerable geophysical work was conducted in the area before decision was made as to the location of the first test.

C. M. Joiner, Dallas operator, is reaming hole to set 5 3/16-inch casing to make a production test on his Mrs. Daisy Bradford 3, located several miles southeast of Overton, after encountering favorable oil showings at 3536-92 feet. This test is near the center of the north line of the Bradford 975-acre tract, Juan Ximinez survey, and in wildcat territory that has lately been the scene of leasing activity by several major companies. Joiner's first test on this tract was junked at 1290 feet, and a second hole was lost at 2546 feet.

New Depth Record for Production in Big Lake Field

San Angelo, Texas.—Drilling depth records outside of California were taken by the Big Lake Oil Company's University 3-C, located in the Big Lake field, when the hole was carried to 8923 feet and washed down to test for production, which amounted to 79 barrels of high gravity oil during nine-hour gauge August 17. This well failed to yield the expected volume of oil and gas when carried to the regular deep pay in the field, and has been deepened slowly to try for a lower producing horizon. Drilling is to be resumed with rotary.

Production from the deep horizon in this field continues to climb despite the application of back pressure on wells in the 8500-foot horizon, and during the 24-hour period ending 7 a. m. August 18, the five completed wells made 9724 barrels of 58-62 gravity oil and 115,204,000 cubic feet of gas. Big Lake Oil Company's University 2-C, which has a total depth of 8603 feet, made 2317 barrels of oil and 31,236,000 cubic feet of gas during this period, representing an oil increase of 279 barrels over the previous day. This well has 550 pounds of back pressure applied. Group One Oil Corporation's three deep wells made 6300 barrels oil and 71,530,000 cubic feet of gas on this gauge, including 2720 barrels oil and 26,160,000 cubic feet of gas from the discovery well of the deep horizon. The latter concern is moving in heavy rotary to drill University 4-B.

Production of deep wells in the Big Lake field in listed below for the 24-hour period ending 7 a. m. August 18:

Well No.	Bbls.	Cubic Feet	Lbs. Back Pres.	Total Depth
Group One Oil Corporation—				
1-B	2720	26,160,000	165	8523
2-B	2085	27,520,000	550	8489
3-B	1495	17,850,000	300	8633
Big Lake Oil Company—				
1-C	1107	12,438,000	450	8668
2-C	2317	31,236,000	550	8603
3-C	79	.....	...	8923
4-C	75	.....	150	8220

Abandon Torsion Balance Prospect

Houston.—Rycade Oil Corporation and Amerada Petroleum Company have abandoned their joint wildcat test, Rapid City 1, on the Austin Bayou torsion balance prospect two miles south of Danbury, Brazoria County. The well was abandoned in shale at 6275 feet, and no promising oil or gas showings were reported. This is the only test put down on this prospect, which is only a few miles of the Danbury dome that is being developed by Shell Petroleum Corporation.

Four New Locations Announced for Tests in Mississippi Gas Area

Jackson, Mississippi. — Although no new gassers were completed in the Jackson gas field which now has 10 gassers with a combined daily open flow of close to 200 million cubic feet, four new locations, two of them by Gulf Refining Company, were announced, two being in Hinds County and two in Rankin County. One failure was recorded, this being Jackson Oil & Gas Company's Patton 1, NE NW Section 17-5-2e, Rankin County, in which drill pipe was frozen after losing returns. Midway chalk was topped at 2546 feet, surface elevation being 301 feet, and total depth was 2549 feet. Efforts to dislodge the pipe were unsuccessful and the hole was junked.

Both of Gulf Refining Company's new locations announce during the week are in Hinds County, one being Crane 1, SW NE Section 26-6-1e, and the other being City of Jackson 1, NW SE Section 10-5-1e, surface elevation being 255 feet. In Rankin County, Pearl River Oil & Gas Company, which has a commercial gasser in that part of the field, erected derrick for Pate 1, NW SE Section 12-5-1e, elevation being 267.6 feet. Southern Petroleum Company also erected derrick for Investment 1, NW SE Section 12-5-1e, elevation being 263.7 feet. Gulf Refining Company has rig up for Hartfield A-1, Section 7-5-2e.

Two tests are ready to drill in in the Hinds County part of the field, both being owned by Capital Oil & Gas Company. They are Brown 1, Section 28-6-1e, which topped chalk at 2499 feet and set 6⅝-inch casing at 2496 feet with total depth of 2503 feet, elevation being 302 feet, and Clark 1, Section 10-5-1e, which topped chalk at 2501 feet and set 8¼-inch casing at 2490 feet, elevation being 266.3 feet.

Considerable interest is being manifested in A. C. Glassell and associates' two tests near Natchez, Mississippi, in the southwestern part of the state. Their Belz-Hoover 1, Section 1-5-2w, Wilkinson County, August 16, was drilling gummy lime at 3690 feet and Stowers 1, Section 28-8-2w, Adams County, is coring at 870 feet. Paul J. Fly and E. D. Phillips, geologists for Humble Oil & Refining Company, have recently been working in the Natchez area watching progress of the tests and doing geological work. B. E. Bremer, geologist for The Texas Company in Mississippi, has also been to Natchez recently.

After five core drill tests were sunk by Gulf Refining Company on the block of acreage under lease in Lauderdale County, Mississippi, north of Meridian, by Lauderdale Oil & Gas Company, Gulf Refining Company decided not to take a proposal to drill a test for the Lauderdale company which has drilled two failures on the block. Two core drill outfits were used in the five tests but these have been moved to the Gulf Refining Company's block of acreage in Clarke County, east central Mississippi, 60 miles south of Meridian. The tests in Lauderdale County showed that the tract covered had formations that run normal with the regional dip, it was reported.

The only active tests in Alabama now under way is P. J. McAlpine and A. D. Morton's O'Neal Estate 1, Section 8-2s-13w, Lauderdale County, near Florence, which is drilling ahead in white limestone at 1910 feet after resetting 8¼-inch casing in that formation at 1908 feet.

Laredo, Texas.—Over a dozen completions, most of them in the Muckelroy field of Zapata County, were reported in the Mirando district the past week, their combined initial production being approximately 1200 barrels of oil and 15,000,000 cubic feet of gas. The report of completions and drilling wells appears in the regular departments in the back of this journal.

Completion of Good Wells Boosts Hobbs Potential

HOBBS, New Mexico.—Intensive field work carried on in the Hobbs area in recent months is being reflected by increased potential production, which was officially placed at 287,246 barrels from 42 wells in the 4200-foot lime horizon, according to figures released by Umpire C. G. Staley on August 15. During the first 15 days in August the field added 14 wells, which were given a combined daily potential of 119,481 barrels, and indications are that the last one-half of the month will offer another heavy quota of completions. These potential figures are based on average potential of each 40-acre unit, and the total for the field is actually greater since four units have a pair of wells on each. There are now 35 40-acre units in production.

Production allowance for the Hobbs field decreased from 35,000 to 32,250 barrels for the new proration period, due to companies that take their own production having drawn a smaller production quota by reason of other unit owners making gains. Gypsy Oil Company, Tidal Oil Company and The Texas Company have arranged to accommodate their own production through the use of common carrier pipe line service of Humble Pipe Line Company, Atlantic Pipe Line Company and Shell Pipe Line Company.

Amerada Petroleum Corporation took the leading position on production allowance for the new proration period, with a quota of 5708 barrels daily from four wells on as many separate units. These wells were credited with a combined potential of 57,937 barrels, including a 19,246-barrel producer on State 1-A, which was mentioned last week as a completion. Midwest Refining Company holds second place with an allowance of 4,613 barrels from nine wells on 11 units, but only 31,094 barrels of potential. Geo. F. Getty Oil Company earned a production quota of 4,541 barrels daily for the new period through having 46,591 barrels potential from three wells on as many separate units. Tidal Oil Company's single producer on the Grimes 80-acre lease retains its record for the biggest well in the feld, with a potential of 21,496 barrels, but will be pinched to 2009 barrels over the balance of August.

Midwest Refining Company's Byers 33, Section 4-19s-38e, was completed in time to enter the netw proration period after having blowout on August 8 while drilling in lime at 4010-25 feet, and was credited with a potential flow of 21,249 barrels daily, with an estimated flow of 20,000 cubic feet of gas. This company's State 8, Section 8-19s-38e, blew in last week at 4012-26 feet estimated at 10,000 barrels daily, but was not completed in time to qualify for the new proration period, and must remain shutin until September 1.

Drilling Time Record

Amerada Petroleum Corporation's McKinley 4 established a new record for elapsed drilling time in the field, and added to its laurels by negotiating the entire depth without having used rotary mud or compounds. This well was spudded July 3 and was on production August 13 with an initial production of 14,062 barrels of oil and about 10,000 cubic feet of gas at 4170 feet. About two weeks of this time was lost in cementing three strings of casing, and making ready to place the well on production. Carl Short, Dallas contractor, drilled the well, and used fresh water to circulate. Usual troublesome gas in the upper section of the lime was missing. Heavy mud was kept on hand to be prepared for an emergency, but the water proved adequate in controlling the gas, which was allowed to escape through the blowout preventer.

The California Company's State 1 failed to gain in oil and gas flow when deepened during the past week from 4170 to 4191 feet after having made a light oil flow at the shallower depth. This well was replaced on production on the afternoon of August 14 after drilling deeper and lowering three-inch tubing. The well made 70 per cent cut oil during first few hours, but cut oil declined to 45 per cent. Open flow gauge taken on the following morning showed 65 barrels fluid per hour, 25 per cent b.s. and water. The gas flow was rated at 12,500,000 barrels daily. Water was used to circulate in deepening the hole with rotary, as it was found that losses on drilling fluid were considerably less than when mud was used. The weight of the mud-ladened fluid on the porous lime horizon accounted for the difference in losses. The well is not believed to be making bottom hole water, and production is expected to be pipe line oil after the hole has been adequately flushed.

Vacuum Oil Company is the latest entrant into the Hobbs field, having made location last week in the nec sw Section 31-18s-38e, thus giving offsets for Skelly Oil Company, Shell Petroleum Corporation and Empire Gas & Fuel Company.

(*Continued on page 74*)

Hobbs Field, New Mexico, Operations

Operator:	Drilling Tests	Derricks & Rigs	Locations	Total
Amerada Petroleum Corporation	4	..	..	4
Atlantic Oil Producing Company	1	..	1	2
The California Company	2	2	..	4
Continental Oil Company	6	..	..	6
Empire Gas & Fuel Company	3	..	..	3
Geo. F. Getty Oil Company	1	..	1	2
Gypsy Oil Company	5	..	..	5
Hobbs-High, Inc.	1	..	..	1
Humble Oil & Refining Company	8	..	..	8
Humble-Kirby Petroleum Company	1	..	..	1
Landreth Production Corp. et al	2	..	..	2
Midwest Refining Company	8	1	..	9
Ohio Oil Company	1	..	..	1
Ohio-Independent Oil & Gas Company	1	..	..	1
Prairie Oil & Gas Company	1	..	2	3
Shell Petroleum Corporation	12	1	3	16
Skelly Oil Company	1	..	..	1
Sun Oil Company		1	..	1
The Texas Company	1	..	2	3
Texas Pacific Coal & Oil Company	1	..	..	1
Tidal Oil Company	2	1	..	3
Vacuum Oil Company		1	..	1
Total	62	7	9	78
Total previous week	67	7	8	82

Gulf Coast and South Texas Fields

JACK LOGAN, *Staff Representative, Houston, Texas*

Pettus Curtailment Needed to Halt Price Reduction

HOUSTON.—Although there has not been any reduction as yet in the posted price for Pettus crude, the schedules of Humble Oil & Refining Company and Gulf Coast Pipe Line Company still listing it at $1.40 per barrel, some oil is being moved from the field at a lower price. With no pipe line outlet existing, although there were more than a score of producing wells in the field, the market was weak, and only part of the field's capacity could be moved out. Consequently several producers were unable to market any of their oil until Houston Oil Company last week entered the market at $1.15 per barrel. It is reported to be shipping the crude by tank cars to its Camden, Arkansas, refinery.

Some relief from threatened further weakening of the Pettus crude market is seen in the action of operators in the field early this week in pleging themselves at a Houston meeting to cooperate in the state-wide conservation program that has just been launched. The Pettus operators have agreed to limit future drilling as much as possible, and to keep producing wells pinched in to relatively low output. Production curtailment was already being practiced to considerable extent by flowing the wells through small chokes, and on the accompanying table, showing average daily production of the field, most of the wells included were partially pinched because of lack of storage or market outlet.

Since completion of the discovery well at Pettus on February 1, 1930, the field has produced approximately 500,000 barrels of oil. July production amounted to 160,550 barrels.

There are 35 active rigs in the area, with half a dozen tests down to the prospective producing sand, while various others are due to reach that horizon in a short time.

Four of the wells which are down to the oil sand are in the Pettus townsite. Getty Oil Company's No. 1, Block 40, south offset to Glasscock Brothers' Block 41 gas and gasoline producer, topped the sand at 3848 feet and penetrated it to 3852 feet. It showed some oil and a lot of gas, and 6⅝-inch casing has been cemented above the sand. The other three prospective producers in the townsite are all Houston Oil Company tests. Number 1, Block 35, set seven-inch casing at 3885 feet after encountering the oil sand at 3889-98 feet. Number 1, Block 23, has set casing after testing 375 feet of oil in five minutes at 3906-11 feet. Number 1, Block 33, has cemented casing at 3899 feet following drill stem test which showed 350 feet of oil, the producing horizon being at 3902-10 feet. Glasscock Brothers' No. 1, Block 24, encountered oil sand at 3865-79 feet, but was found to be leaking when being swabbed in, and the well was killed to repair the casing. S. R. C. Corporation has skidded the derrick and will drill a new hole, the first on that block having been a failure by virtue of drilling through the producing sand because of error in measurement, and subsequent unsuccessful efforts either to plug back and get production or to sidetrack.

In the Nichols pool, seven miles south of the Pettus discovery oil well, a third prospective producing horizon has been found. C. F. Nichols et al's Hicks 4 made a strong flow of gas for two minutes on drill stem test at 4409 feet, but the test was not completed because of the seat failing to hold. In former tests two shallower producing horizons have been established in this pool, by the same company on the same lease. Hicks 1 was completed as a small gas well at 1918 feet. Hicks 2 was a dry hole, and Hicks 3, located 350 feet south of No. 1, tested and passed up five gas shows of varying importance, and was completed at 3615 to 3641 feet with estimated production of 15,000,000 cubic feet of gas daily. It began spraying oil shortly afterward, and is now yielding around 50 barrels of oil daily.

Wildcats

E. M. Jones, Rapp 2, a wildcat 3 miles north of the Nichols pool, is drilling shale at 2740 feet. William F. Morgan and Independent Oil & Gas Company are drilling shale and lime at 3063 feet in Quincy 1. Humble Oil & Refining Company and Hurlbut et al's Wood 1, five miles southeast of Beeville, has spudded. Simms Oil Company's Holzmark 1, five miles southwest of the Nichols pool, is drilling shale and lime at 2415 feet. Trinity Drillers and T. B. Slick's Theis 1, one mile northeast of Cadiz and 10 miles west of Beeville, is drilling shale at 509 feet.

Union Producing Company's Ray 10, two miles northeast of the Bee County discovery well, and 3000 feet northwest of Ray 3, is trying to pull liner, having failed to develop into a producer at 4032-40 feet. The same company's Ray 17, three miles east of oil production, is drilling shale and lime at 2920 feet, and its Ray 24, which is 1½ miles north of the oil production, is drilling shale and lime at 2678 feet.

In the Cosden pool, west of the main Pettus field, Batex Oil Company's Barnett 2 is drilling shale at 2805 feet. Cosden Oil Company's McKinney 4 is drilling shale and lime at 2415 feet. Houston Oil Company's Neumann 2 east offset to Cosden Oil Company's producer, McKinney 2, is drilling shale at 3220 feet. Sun Oil Company's Barnett 1, south of the Batex test, is drilling shale at 1582 feet.

In the Grayburg pool eight miles west of the Pettus

PETTUS PRODUCTION

Week ending August 14. (Daily average).

Company—Lease—	No. Wells	Av. Daily Prod.
Barnsdall Oil Company, Roberts.....	1	161
Baytex Oil Company, Barnett Hrs.	1	102
Buchanan et al, Block 38, Pettus.....	1	185
Cosden Oil Company, McKinney 1-2-3..	3	650
Glasscock Brothers, Block 41, Pettus....	1 (gasoline)	15
Houston Oil Company, Beasley.....	1	704
Houston Oil Company, Newman.....	1	205
Humble O. & R. Company, McKinney..	5	2232
Nichols Oil Corporation, Hicks.....	1	50
S.R.C. Corporation, Block 37, Pettus....	1	247
Union Producing Company, Ray.....	7	1768
Total	23	6319

discovery oil well, Arkansas Natural Gas Company has abandoned Kimball 1 at 3863 feet. Grayburg Oil Company will probably abandon Copeland 1 in the William Sanford Survey, its depth being 3834 feet in shale, and the same company's Kimball 2 cored shale at 3725 feet. Several other tests in that immediate territory are shut down, as it appears that the one producer drilled by Grayburg Oil Company will be the extent of the success in this pool. Several offsets or nearby tests have proved failures the past several weeks, and even the Grayburg Oil Company discovery well is no longer producing.

Oil Production in Saxet Field Adds New South Texas Area

Corpus Christi, Texas.—A new oil producing area in South Texas was ushered in Saturday, August 16, when Saxet Oil Company, of which W. L. Pearson of Houston is director, brought in Dunn 6 in the Saxet gas field, six miles west of Corpus Christi, as a flowing well. It came in making around 750 barrels daily of oil, wash water and mud, and was estimated as a 500-barrel oil well. Total depth of the well is 4286 feet, and 8¼-inch casing is cemented at 4375 feet. The oil is high in gravity, the report being that it tests 40 degrees.

There are several completed gas wells in the Saxet field, which has been devlopd by Saxet Oil Company, principal lease owner in the area, and although Dunn 6 is the discovery oil well, there have been showings of oil in several other tests. Saxet Oil Company's Donigan 1, one mile south of the new oil well, is reported to have yielded as much as three barrels daily of net oil with considerable fluid showing, although it was not finished as a commercial oil well. Its depth was 4089 feet.

Sun Oil Company has made location for Turner 1 two miles northeast of Odem in the southeast part of San Patricio County and a few miles south of Sinton. The location is 600 feet from the east line and 1600 feet from the north line of the 1500-acre tract. Operations are due to begin immediately.

Houston Oil Company has been granted an extension from August 15 to September 1 to begin drilling operations on the R. Morgan tract seven miles west of Corpus Christi. Location has already been made for the test, 350 feet east of the Lawrence 2 gas well of Thompson et al. Morgan has leased two tracts, aggregating about 500 acres, lying east of the gas-producing Lawrence land, to Houston Oil Company.

Cosden Oil Company's Schmalsteig 1, six miles south of Sinton, in Section 9, H. Powell subdivision in B. Blanchard Survey, San Patricio County, was reported late last week drilling at 3785 feet. La Feria Oil Company's C. C. Smith, J. C. White Survey, San Patricio County, at the same time was drilling sand at 4085 feet. Union Producing Company's Welder 4, E. Portilla Survey, San Patricio County, was drilling water sand at 1685 feet.

Houston Oil Company is rebuilding derrick on Ross Boothe 1, northeast edge of the Lucas gas field, Live Oak County, having pulled the derrick in while attempting to sidetrack. This well gave promise on drill stem test of developing oil production at 5252-59 feet. The same company's Cartwright 22 in the Lucas field is drilling shale at 4715 feet. O'Neill & Catlett have made location for Pat Pugh 1, six miles north of Dinero, E. Garner Survey 253, Abstract 189, Live Oak County, and Markley et al have a derrick up for Reeves Brown 1 in the J. E. King Survey, Live Oak County.

Coastal Operators Organize to Observe Curtailment Order

HOUSTON.—A large amount of work was done during the past week by Texas Gulf Coast operators toward formulating programs for reducing crude production in accordance with the state-wide conservation program, and as early as Tuesday, August 19, plans had already been worked out for various fields, including the booming Pettus area. In that field new drilling will be reduced to a minimum, and producers will continue to hold production down by flowing wells through small chokes. Details were near completion Tuesday for Barbers Hill, but the operators had not yet signed the agreement. On the same day a meeting was seheduled for consideration of details for curtailing activity and production at Refugio.

P. C. Murphy of Houston, assistant to the president of Humphreys Corporation, is general chairman for the Gulf Coast in this conservation program, sponsored by operators throughout the state and authorized by the Railroad Commission of Texas in an order issued recently and effective on August 27. Following his appointment as chairman of Coastal operators, Mr. Murphy last week appointed chairmen for committees of five for each of 33 fields, and each chairman was asked to name four other operators to associate with him in investigating the conditions of the field. There was ready response to the call for cooperation, and within a brief time the numerous committees were making rapid progress in gathering data and information affecting curtailment in their fields. Mr. Murphy has been cooperating with the various committees, and he predicted that all field programs and schedules of production would be completed by Saturday, August 23.

Some of the principal protestants to the proposed statewide conservation program were from Gulf Coast fields, but the program as now being carried out is meeting with practically unanimous endorsement, the plan being to exempt pumping wells from production curtailment, but to produce flowing wells through small chokes, giving a minimum gas-oil ratio, at the same time limiting drilling to lease obligations only, and shutting down unnecessary wells after casing is set wherever possible. There will also be effort to arrange future locations so that a minimum number of offsets will be necessary. The railroad commission suggested that an effort be made to reduce Gulf Coast production by 15 per cent, which would amount to approximately 21,000 barrels daily, but final determination of the actual amount of reduction and the working out of details was left up to the judgment of the operators themselves. Preliminary indications are that immediate curtailment to the extent suggested by the railroad commission can hardly be hoped for, but that considerable reduction in production can be gradually effected through limitation of drilling.

Houston.—The Texas Company's Rayne Heirs 5 at Evangeline field, Acadia Parish ,Louisiana, deepest test ever drilled along the Louisiana-Texas Gulf Coast, has been abandoned in shale at 8730 feet. No difficulties had been experienced in drilling the well prior to its abandonment. Almost one year elapsed during the history of the test.

A noteworthy achievement during the course of putting the test down was a successful sidetracking job nearly three months ago. After failure to fish out a core barrel lost at 8144 feet the hole was sidetracked at 8138 feet, without any difficulty. From 8150 feet down to the final depth, a total of 580 feet, the progress was very slow, requiring 50 days, an average daily progress of about 11½ feet. During the first 50 days after spudding, a depth of approximately 4800 feet was attained.

Completion of Good Wells Boosts Hobbs Potential

(Continued from page 71)

Volume of field work at Hobbs sustained a loss during the past seven-day period, owing to 10 wells having been completed. The field has 62 tests underway, seven derricks and rigs, and nine locations, making a total of 78 operations, or four less than the previous week.

Next important completions for the field will be on the northwest end, where four tests are drilling about one-half mile in advance of production. These tests are logging key formations normal, and herald further extensions to the producing area in this direction.

Having encountered some difficulty in putting proration in effect on schedule during the first two proration periods, the advisory committee has voted to wipe the slate clean on wells that produced more than their allowances, and no attempt will be made to "collect" such averages. However, in the future all wells will be held strictly to production quotas.

Work is still underway on a plan to eliminate open flowing of wells in the Hobbs field to determine production potentials, and a committee of engineers expect to have everything in readiness to take September 1 gauges through tubing, with pressure readings and gas volume used to fix the estimated maximum crude yield per day. Operators have agreed to give such a plan a trial.

Oklahoma City Producers Threaten State Proration Program

(Continued from page 62)

bargain priced crude in the Panhandle are expected to cease shortly. North Texas refiners have lately been able to meet their entire crude requirements at bargain prices, due to operators in the district having been placed on proration, or refused market relief by major purchasers. Some plants were already booked up on contracted oil, and could not take advantage of attractive offers made by producers in need of market outlet, while a few purposely avoided buying crude at less than posted, but the latter are by far in the minority. Plant owners are expecting a firm crude market situation to follow in the wake of the state-wide proration enforcement, and for this reason are giving thoughts toward lining up a regular crude supply. A number of plants are likely to curb their crude charges to stills when deprived of their current supply of distressed priced oil.

U. S. motor gasoline market is rather sluggish with a price range of 5½ to 5¾ cents per gallon, while standard grades of fuel oil have a slow market at 40 to 50 cents per barrel. These quotations are shaded further by West Texas refiners who are forced to absorb the freight differential in reaching the principal markets.

Crude runs to stills at refineries, reported to the American Petroleum Institute for the week ending August 16, were 17,939,000 barrels, or a daily average of 2,562,000 barrels. This is a gain over the preceding week of 124,000 barrels a day. Stocks of gasoline showed a further decline last week of 1,477,000 barrels, the total reported as of August 16 amounting to 41,252,000 barrels. The upturn in still runs while not serious is nevertheless unfavorable at this time. Yields of gasoline from crude continue to show a gain in percentage recovery, with the result that gasoline production is not fully reflecting the reduction being made in runs to stills.

Magnolia Extends Pipe Line System in Oklahoma to Handle Burbank Oil

Tulsa, Oklahoma. — Materials have been purchased by Magnolia Pipe Line Company to proceed at once in extending its Oklahoma pipe line system from Depew station, Creek County, to the Burbank field, a distance of about 60 miles. An order has been placed with Jones & Laughlin Steel Corporation for eight-inch welded pipe, which will be delivered in time to start welding work about August 25. This pipe will vary from 38 to 40 feet in lengths. Construction crews engaged by the company will weld the pipe with acetylene. Jack King will be in charge of this welding.

A field pump station will be erected at Burbank, using De la Vergne oil engines and National Transit pumps.

Since Magnolia Petroleum Company is not an important oil producer in the Burbank area, it is assumed that the extension line is being built to perform common carrier service for other interests, and possibly to handle crude sold on contract by Phillips Petroleum Company to Vacuum Oil Company.

Dallas, Texas.—Magnolia Pipe Line Company is erecting five large steel tanks at three separate points along its Oklahoma-Texas trunk line system to facilitate the movement and segregation of varied grades of crude handled. Two 55,000-barrel steel tanks are being erected in the West Chandler field, Lincoln County, Oklahoma, where Magnolia Petroleum Company is operating, and also a source of common carrier crude shipments for the pipe line company. One 80,000-barrel steel tank is to be added to the Alvord, Texas, station and tank farm, and two 55,000-barrel steel tanks will be added at Corsicana. These tanks will have steel roofs, and will be erected by the Kirk-Morrow Iron Works Company and Chicago Bridge & Iron Works.

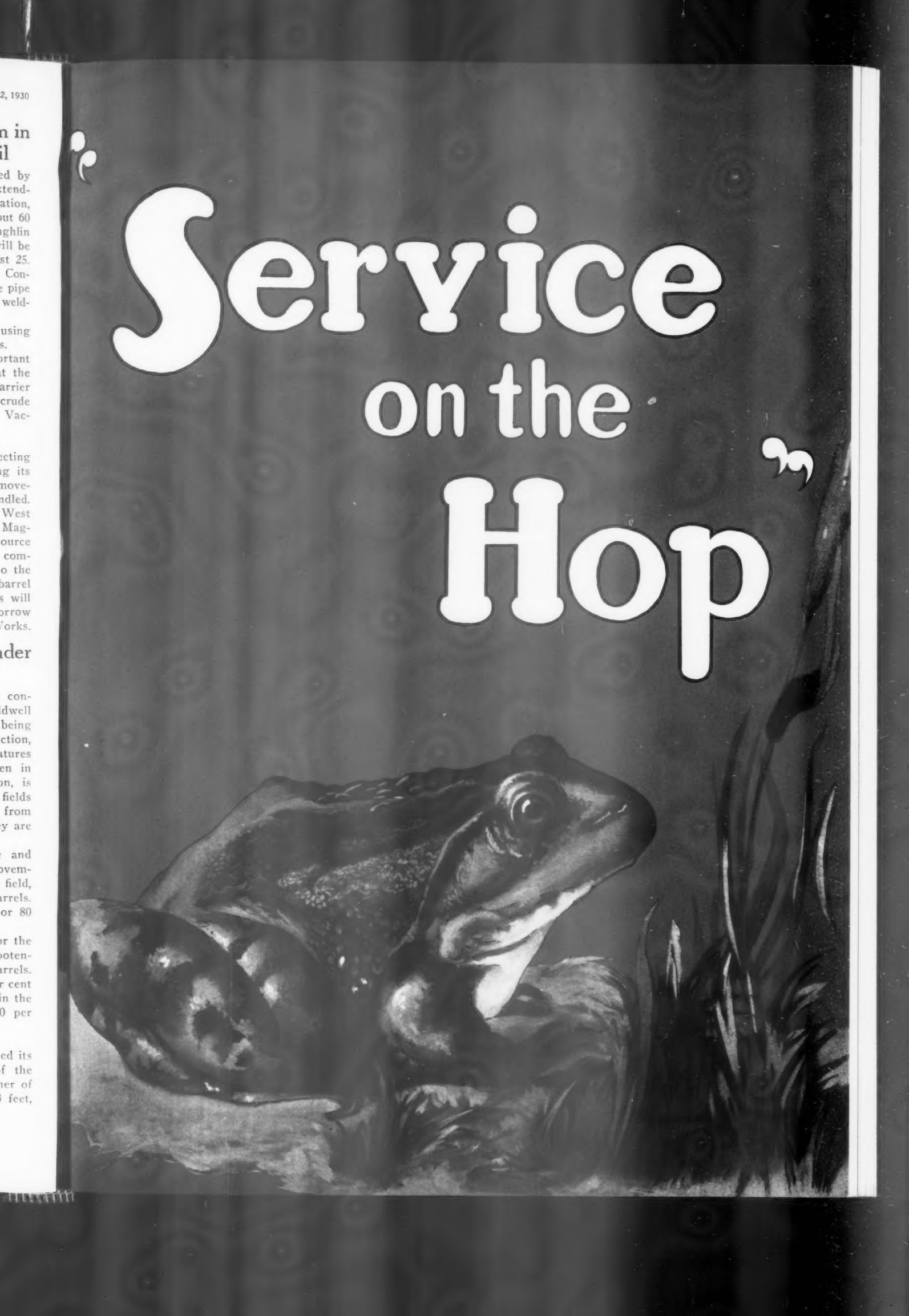
Darst Creek and Salt Flat Fields Under Rigid Proration

Seguin, Texas.—In accordance with the state-wide conservation movement in Texas the Salt Flat field, Caldwell County, and Darst Creek, Guadalupe County, are now being operated under definite schedules of allowable production, the schedules having been sanctioned through signatures of the producers. H. H. Fitzpatrick, who has been in charge of Darst Creek proration since its inception, is also serving now as umpire at Salt Flat. The two fields are virtually counterparts of each other, producing from Edwards limestone at about the same depth, and they are only about 15 miles apart.

The present schedule for Salt Flat is effective and retroactive to August 4 for the period August 4 to November 4, 1930. The aggregate potential of leases in the field, determined by average of 16 days gauge, is 21,180 barrels. Allowable production is set at 16,941 barrels daily, or 80 per cent of the potential.

The current schedule in effect at Darst Creek is for the period August 14 to October 2, 1930. The aggregate potential of leases listed, by 24-hour gauges, is 156,822 barrels. The allowable production is 42,004 barrels, or 26.78 per cent of the aggregate. In addition 462 barrels daily is set in the "free oil" column, representing leases producing 50 per cent or more of water.

Houston.—Cranfill-Reynolds Company has abandoned its wildcat, Moores Bluff B-1, two miles southeast of the Esperson field, Liberty County, in the northeast corner of the Lewis Davis Survey. The test had reached 4703 feet, and it was then in shale.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The tank that defies corrosion! Made for use in fields where hydrogen sulphide gases are found in sour crude—constructed similarly to the B. S. & B. Vapor Pressure Steel Tanks. Redwood is used exclusively. Equipped with the Thief Valve which withstands 16 ounces pressure and 2 ounces vacuum. No metal comes in contact with the hydrogen sulphide gases—all metal parts on the inside insulated with wood.

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A device that means safety for your men. Eliminates fire risk, is lasting and practical in every way. Portable and adaptable to any size battery.

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BARTLESVILLE - OKLAHOMA

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

New Methods of Potentials May Affect California Drilling

LOS ANGELES.—A radical departure in the method of calculating allowables in California fields, where intensive drilling is increasing the actual potential, has resulted in a split potential column which makes the hasty completion of large wells go for naught and leaves the "effective" potential the one from which the current allotments are determined. The effective potential column thus becomes the normal maximum output of the field, while the actual potential may be much higher where large wells have been completed for no definite reason.

The latest proration schedule shows Elwood, Long Beach and Ventura Avenue to be the only ones given different effective and actual potentials, these areas having been guilty of what might be termed unnecessary drilling. Application of the effective potential, as against a much higher actual potential, was more in the form of a penalty than a discriminatory measure. Regardless of how high the potentials may rise, intensive development may be useless.

Explanation was made last week of the change to hold the allowables of fields piling up high potentials to their former totals unless the more settled fields showed declines and permitted the climbing fields to obtain a bigger slice of the total allowable. The split potential column forms a more equitable basis for calculating allowables, the actual and the effective totals being the same as long as the field does not stage an unnecessary climb.

Playa del Rey was given an effective and actual potential of 19,760 barrels, the penalty not being imposed here for some reason. Since the field is not under the curtailment agreement, the difference would have been nothing more than a gesture. The theoretical allowable was fixed again at 6000 barrels. (*Continued on page 86*)

Ultimate Profit of Development At Playa del Rey in Doubt

LOS ANGELES.—Early completions in the townlot area at Playa del Rey will pay out, but wells finished toward the end of the present excitement probably will settle to a low level and never return the original drilling cost. At least, this is the sentiment of a leading petroleum engineer who predicted that there was little hope for edge wells in the Torrance field—a district which compares roughly with Playa del Rey and which failed to prove profitable for many operators. Companies holding large leases should find the field a profitable venture, but the nature of the sand does not seem to justify intensive drilling in the townlot sector, where most of the activity is centering. The decline of early completions has been rapid enough to show a much sharper drop for wells finished as offsets to older producers. The lower sand probably does not have an average thickness of more than 150 feet and it is only reasonable to expect the first completions to skim the cream from this new field. Leases such as those of Ohio Oil Company and Union Oil Company can be protected from close drilling and sensible development of these tracts should bring fair returns on the original investment. The field is not a high pressure

CALIFORNIA PRORATION SCHEDULE
August 16-31, 1930

Group No. 1—	Aug. 16-31 Actual Bbls. Daily	Potential Effective Bbls. Daily	Per Cent Cut	Aug. 16-31 Allotment Bbls. Daily	Production Aug. 1-15 Bbls. Daily	Add. Curtailment Required Bbls. Daily
Elwood	104,155	80,373	47.8	41,955	49,885	7,930
Kern Front	22,050	22,050	47.8	11,510	10,529	981*
Long Beach	193,305	189,534	47.8	98,939	103,715	4,776
Maricopa Flat	17,180	17,180	47.8	8,968	9,964	996
Mount Poso	23,755	23,755	47.8	12,400	10,524	1,876*
Round Mountain	10,585	10,585	47.8	5,525	4,028	1,497*
Santa Fe Springs	194,950	194,950	47.8	101,764	107,896	6,132
Seal Beach	36,670	36,670	47.8	19,142	20,260	1,118
Ventura Avenue	93,685	90,723	47.8	47,357	48,044	687
	Unobtainable			6,885	.....	6,885*
Total Group No 1	696,335	665,820	47.8	354,445	364,845	10,400
Total Group No 2	377,055	376,755		229,868	223,070	6,798*
Group No. 3—						
Kettleman Hills	83,500	83,500	84.30	13,110	13,095	15*
Playa Del Rey	19,760	19,760	69.64	6,000	19,760	13,760
Total Group No 3	103,260	103,260	81.49	19,110	32,855	13,745
Grand Total	1,176,650	1,145,835		603,423	620,770	17,347

Notes: *Indicates underproduction in comparison with new allotment.
The total potential of the state increased 39,690 barrels daily during the first half of August while the average daily production increased 13,555 barrels daily during the same time.
Special curtailment will apply at Elwood and Santa Fe Springs in order to obtain the allotment as shown in this schedule.

area like Long Beach or Santa Fe Springs, being almost as much a storage reservoir as a pressure-driven field. Covering a large acreage and plunging gently toward the edges, the structure may have a long life, but there is evidence that large initial yields are not to be expected. Production has increased to about 18,000 barrels per day, the decline having fallen considerably short of new oil. Several completions are due within the next 10 days and peak production probably will be reached within 60 days. Drilling wells have increased to 40, with more than 30 active locations. New locations have been made at a rapid rate, despite a move to limit operations in other fields. Extension of the field to the south and west has stimulated activity, since this part of the field is dominated by townlot operators. Completion of two good wells offset failure to obtain commercial production in two outpost tests. Ohio Oil Company is still trying to make a producer of Del Rey 2, located in the southeastern extension, the result of the test to determine the trend of production and activity in this sector. The well was drilled to 6678 feet and found the deep zone at a much greater depth than the discovery test. The company's Dickenson 1 is being tested at 6505 feet, with the 8⅝-inch casing cemented at 6222 feet. This is also regarded as an edge well but has a chance at commercial production. Union Oil Company has become active in the field, following completion of Del Rey 1 as a good producer in the shallow zone, but it will not be necessary to start an intensive drilling campaign to protect the company's large lease. Entry of many small operators into the field is the aftermath of the intensive leasing campaign carried on soon after completion of the discovery well. Expiration of drilling clauses has necessitated inaction where wells ordinarily would not have been started, but the increased activity will give a peak flow ahead of schedule.

North Belridge Test Has Promise

Taft, Calif.—Belridge Oil Company has reached a depth of 5310 feet in No. 15, a deep test in the North Belridge field, and again has a chance for production in the Temblor zone. Baroid is being used to control the gas pressure and opening of additional sand has increased the volume. This well was tested at 5086 feet, following the usual excitement caused by discovery of oil and gas in the Temblor zone, but a flow of only a few barrels of light oil and three million cubic feet of gas was obtained. Heavy mud had been used to control the well and the test probably was affected by the practice. Completion of a good well in the Temblor in the field would result in many tests in this and other nearby fields.

Santa Fe Springs Work Negligible

Los Angeles.—Santa Fe Springs has become so quiet that field activity is confined to the completion of half a dozen wells started late in the development and the reworking of a few doubtful producers. A hasty glance at the detailed field report reveals the magnitude of the change effected since January 1, the number of active tests now numbering only one-seventieth of the former total. Plugging back to the shallower zones has become a common practice, but even this procedure is showing a decline. None of the exceptionally deep tests which threatened to open up a producing sand below the Clarke zone are now active, abandonment of efforts to find deeper producing zones having temporarily removed the possibility of an increase from this source.

Long Beach Activity to Continue

Long Beach, Calif.—Six new locations at Long Beach and completion of several good wells increased interest in this district and insured continuation of the present drilling program, the number of active wells having jumped to the highest figure since the decline of 18 months ago. A shift from the Los Cerritos district to the sector in the south central part of the field has been noted, with new locations in any part of the field not unusual. Following the completion of several large wells south of the fault line, a rush to offset drilling wells has been responsible for the bulk of activity in the section now most attractive. Directly south of the Signal Hill "high," operators are concentrating on leases which were neglected during the original boom. Good completions in the shallower sands have also influenced operators to drill to secure a more stable production. The intermediate zone, lying just below the original producing sands and just above the deep zone, has been overlooked in some parts of the field. In reality, the producing zone is one continuous body of shale and oil sand, but the different levels are commonly separated into zones for convenience. During the previous week, 10 wells were completed, initial production ranging from a few barrels to 2500 barrels. Average initial production of the Los Cerritos district has been smaller than in other parts of the field and most of the deep wells here will not prove profitable. Such was also the case during the development of the shallower zone in this section.

Elwood Again Shows Importance

Santa Barbara, Calif.—The importance of the Elwood field was further demonstrated by completion of Caroline Spalding's Blue Goose 93-4 as a 10,000-barrel producer. Normally a 2000-barrel completion, the well was opened up and allowed to flow to establish the highest possible potential. The oil was clean and such a production near the edge of the field indicates that considerably more than half of the structure lies under the Pacific Ocean. Pacific Western Oil Company contemplates drilling practically to the end of its permits, a distance of nearly 4000 feet from shore. Already wells have been drilled more than 1200 feet from the mean high tide line and means for extending the piers are being considered. The novelty of obtaining oil from underneath the ocean has worn off and the field is admittedly one of the best in the state. The water does not become too deep for piers, engineers believe, but several problems will have to be solved before the outermost ends of the ocean permits may be reached. Barnsdall Oil Company and Rio Grande Oil Company have located Doty 7 considerably north of the present producing line in an effort to extend the field away from the ocean.

Los Angeles.—California-Ventura Oil Company has run a string of 8⅝-inch casing for a test of Holston 1, located near Hermosa Beach and roughly on a line leading from Torrance to Playa del Rey, cores taken between 2775 feet and bottom at 3390 feet showing oil and gas in good quantities. Previous tests in this district have shown both oil and gas but the fractured nature of the sand has prevented a water shutoff and sebsequent successful production tests. Surface indications are favorable for production but the Pacific ocean apparently covers one end of the Torrance structure and the leases available near Hermosa may be outside the producing limits. Holston 1 will be placed on the pump, in the absence of a gas pressure which should cause the well to flow.

Huntington Beach Operators Plan Try For Deeper Production

Los Angeles.—Closely paralleling the previous dull period which have followed waves of overproduction, activity in the settled fields of the Los Angeles basin has declined sharply, these older districts suffering from slumps which must be charged to critical areas. Huntington Beach threatens to become an exception to the rule and is now trying to break into the list of fields in line for deeper production. Rumors of deep tests have been heard for more than a year, while a few feeble efforts have been made to open up new sands. Leasing has been done quietly for some time, but the leading independent companies are now out in the open to secure additional acreage. Probably less is known of the formations below 5000 feet in this field than in any other large Los Angeles basin field, although several edge tests have been made with little success. Richfield, Athens-Rosecrans, Seal Beach, West Coyote, Montebello and Dominguez are extremely inactive, while Potrero, which can hardly be classed as a settled field, is much more active than the producing sands seem to warrant. The townlot section of this field is the center of a search for a good sand and operators still have a chance to develop a productive zone below 6000 feet. The oil produced here is very light and makes excellent refining stock. Even Seal Beach, where a delayed drilling program in the conservatively developed section was carried out after the townlot area was drilled, has only one drilling well.

Kettleman Hills Completion Due

Coalinga, Calif.—Associated Oil Company is preparing to complete Whepley 1, an important North Dome test at Kettleman Hills, having cored more than 1000 feet of Temblor sand below the nine-inch shutoff at 6860 feet. This well is an offset to Petroleum Securities Company's Felix 1, now producing about 800 barrels of oil, and the result of the production test will undoubtedly influence the policy of operators holding offset leases. This part of the field has been a disturbing factor since the first of the year and it is probably here that the greatest activity will be noted unless some agreement is reached to limit operations. Superior Oil Company is coring at 8050 feet in Huffman 1 and has cut upward of 1000 feet of Temblor sand. Continental Oil Company is rigging up Elliott 2-16, an offset to the discovery well, while Pacific Western Oil Company is building a rig for No. 12. Active tests have increased to 11, twice the number of drilling wells as of June 1. Companies controlling large leases are strengthening their transportation, pipe line and communication facilities, preparatory to the future drilling campaign.

San Francisco, Calif.—Efforts to develop production in northern counties continue, but few of the scattering tests now under way are looked upon with favor by geologists. Twin State Oil Company is drilling at 4125 feet in Soldani 1, Mendocino County, the formation running to sandy shale. George F. Getty, a leading independent operator, has made a location in Yolo County, Section 23-12n-3w, near Rumsey and on what has been termed the Nigger Heaven dome. This test is on the west side of the Sacramento valley. Scattering tests in San Luis Obispo County are under way, but this district has proved a disappointment. Activity in Tulare County has been stimulated by a recent discovery near Porterville but this district is more properly classed in the southern district.

Rocky Mountain Fields

Three New Wyoming Wildcats

Casper, Wyo. — The list of wildcat wells in central Wyoming received additions within the last week in three different sectors. The Powder River structure, on which several wells have been drilled in the past, none of which was located on structure, is to be tested by Cuyler Oil Company, recently formed by Casper people for the purpose. Leasing troubles and litigation which has prevented drilling in the past several years have now been cleared up and it is believed that finally an adequate test will be drilled. Powder River structure is 40 miles northwest of Casper and was proved by a well drilled in 1925 by Midwest Refining Company on the south slope of the structure.

On the North Platte Structure, five miles west of Casper, Summit Oil Company has resumed the operation which has been standing shut down at 500 feet for the last year. Hole is now to be drilled to 3500 feet if necessary.

The Roy Tarrant interests are ready to spud in a wildcat well on the Lester ranch 25 miles southwest of Casper. Production is expected in the lower Frontier, the Sundance, and the Pennsylvanian series, all within shallow drilling depths.

Midway Dome Test Meets Delay

Casper, Wyo.—Midwest Refining Company's wildcat well on Midway Dome structure, north of Casper, is being delayed in its completion by bailer trouble. The well is bottomed at 5187 feet and there is 2500 feet of lively oil riding on top of 1400 feet of mud and water. Crude has a gravity of 36 to 38 degrees and may be even higher when the hole is entirely bailed out. The gas pressure is showing some increase, and it is believed that the well will flow when once it is cleaned out.

Completion of this test as a commercial producer will be most important to Casper and the Wyoming oil industry. Production from the Salt Creek field has decreased to 25,000 to 30,000 barrels per day, which is only about half the capacity of the Casper refineries of Standard Oil Company of Indiana. A new light oil field will insure an added supply of crude for the refineries.

Soap Creek Area Changes Hands

Billings, Mont.—Wayne E. Esmay of Douglas, Wyoming, representing the G. W. Heinrich interests of Minneapolis, announced here August 12 his company's acquisition of the entire producing area of the Soap Creek oil field, 58 miles southeast of Billings.

The United States Geological Survey rates the field good for 2800 barrels of oil. Esmay says the deal involved a cash payment of $500,000. Field is located on the Crow Indian reservation and the deal includes acquisition by Heinrich interests of tribal leases secured by W. L. Dillon, a geologist of Hot Springs, South Dakota, this summer and of leases formerly owned by the Argo Oil Company, a Colorado corporation.

In the plan for the field's development is a pipe line to Billings to be started within the next 90 days. Such a line would cost $350,000; survey for it was made early in the summer. The oil in the field is black.

Louisiana--Arkansas Field Notes

Zwolle Now 17 Miles of Freakish Producing Territory

SHREVEPORT, La.—Zwolle, whose chalk rock horizon in the 2300-2600-foot level has played many queer pranks on operators, added another to its list during the last week when Pelican Natural Gas Company's Louisiana Long Leaf Lumber Company 3, NE SW Section 4-7-11, four miles east and one mile south of Zwolle east field, was completed at total depth of 2330 feet in marlbrook marl as an eight to 10 million foot gasser, and then 22 hours later on August 13, drilled itself deeper and started flowing oil at an estimated rate of 2000 barrels daily.

Later the well was choked down through quarter-inch choke and on Saturday, August 16, was flowing at the rate of 1200 barrels daily of 40.2 gravity oil. The well is a western offset to the same company's Louisiana Long Leaf 1 in the same section, which was completed last spring as a nine barrel pumper, extending production four miles from the Zwolle east field limits. Two subsequent tests in the vicinity had been dry holes and operators had begun to despair of getting larger production in that locality when the new well came in.

It is the first well in Zwolle which has ever shown any gas and the pressure is 400 pounds, considerably higher than on any previous completions. Ten 500-barrel tanks are being built and Standard Oil Company of Louisiana will extend a four-inch line from the Zwolle east field to take the new production. The producer topped Marlbrook marl at 2330 feet and six-inch casing was set at 2318 feet, with total depth then at 2334 feet. Meanwhile the same company is bailing Sabine Lumber Company 3, SE NW Section 6-7-11, at 2237 feet after topping the marl at 2225 feet and setting six-inch casing at 2222 feet.

The new well definitely gives the Zwolle field a width of 17 miles from east to west in a half-moon shape with the bottom part of the half-moon in the town of Zwolle. No limits have been defined except for the northern edge in the vicinity of the Zwolle townsite and even this is subject to revision in the light of the erratic behavior of the field where large flowing wells are completed offsetting dry holes and vice-versa. H. D. Easton, the geologist who discovered the field, is of the opinion the western limit will extend west of Sabine River into Texas. A formation similar to that in the Zwolle east field has been found 12 miles east of production in W. M. Coats' Collins 1, NW NE Section 28-9-10, Natchitoches Parish, where 8⅝-inch casing was landed during the week at 2224 feet with total depth of 2270 feet.

A. H. Tarver and associates' Sabine State Bank 3, SW NW Section 26-8-12, an extension of the Zwolle east field, completed July 31 in chalk rock at total depth of 2436 feet after topping the chalk at 2400 feet, flowing 1000 barrels daily pinched in and estimated at 4000 barrels daily, followed the behavior of the other two larger wells of that part of the field and went dead during the week but on Saturday, August 16, was revived under air pressure and is making about half its former yield.

Loring Oil Company's perfect record for producers in Zwolle was badly dented during the week when this company abandoned three of Zwolle's six dry holes including the company's deep test in the east field, Bowman-Hicks 5, Section 34-8-12, abandoned in sandy lime at 4176 feet. This company also appears to be about to lose its wildcat deep test, Peavy-Wilson 1, Section 21-6-13, six miles southeast of production in the west Zwolle (Blue Lake) field which hung drill stem while coming out with a core from 4792 feet. Its deep test across the Texas line in Sabine County, Nona Lumber Company 1, James Mason Survey, is progressing well, being down to 1200 feet. Magnolia Petroleum Company, drilling Giaque 1, NW SW Section 26-7-14, two miles south of West Zwolle production, apparently will make this a deep test, having cemented 12½-inch casing at 1197 feet.

Arkansas

Marine Oil Company whose Thompson A-4, SW NE Section 10-18-13, Urbana district, Union County, Arkansas, was completed during the preceding week, flowing 500 barrels of oil by heads, free of water, at total depth of 3555 feet, has announced locations for two more tests in that section, W. B. Thompson B-2, SE NE Section 10-18-13, and Winn Estate F-1, NE SE of the same section. These two locations besides one in Smackover and a workover in the same field comprised the total of new work launched for Arkansas during the week.

The shallow gas field of Pope County, Arkansas, recently opened and still considered wildcat territory, added a 38,600,000 cubic foot dry gasser in Arkansas-Louisiana Pipe Line Company's J. E. Moore 1, SE NE Section 16-9n-21w. Total depth is 1314 feet, 10-inch casing having been set at bottom of the hole. Another gasser was completed in the Sebastian County, Arkansas, gas field in Ozark Natural Gas Company's Weaver 1, Section 27-8-30w, which is making 850,000 cubic feet daily at total depth of 2910 feet with five feet of sand.

Although there has been a great deal of promotional talk going on and one or two map locations selected, none so far has been staked in Miller County, Arkansas, where Lenz and associates' Johnson 1, Section 24-15-26, was recently completed at 2847 feet either in the lower Woodbine or at a contact of upper and lower Cretaceous. Johnson 1 appears in the week's completions as a 25-barrel daily flowing well.

R. W. Norton has decided to complete Hill 1, Section 33-23-16, northwest Caddo Parish, at 5506 feet, in the lower Trinity, this territory's deepest commercial well. It gauged 11,242,000 cubic feet of gas which has a gasoline content of 819 gallons per million cubic feet. The rock pressure is 2200 pounds. The gas was obtained in 16 feet of broken sandy lime. Several major companies and Norton are negotiating for the well and surrounding 5000 acres but no announcement of sale has been made.

North Louisiana Locations

S. P. Borden and associates who recently completed a block of 5000 acres in Bienville and Webster Parishes, have spudded in their first test on the tract, Thomas 1, SE NW Section 27-16-9w, Bienville Parish, and are ready to set surface casing. S. A. Guy and associates have derrick up for Dowling Brothers 1, NW NE Section 31-14-14, DeSoto Parish, Holly district.

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1929	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
May	679,650	115,400	651,100	150,350	35,350	71,500	114,150	72,850	749,250	2,639,600	81,827,600
June	685,200	120,750	688,200	147,500	35,700	70,050	116,750	72,000	827,200	2,763,400	82,902,250
July	722,050	124,250	718,950	148,150	35,750	68,650	122,000	74,250	874,850	2,888,900	89,555,250
August	728,100	127,950	750,750	153,100	36,300	66,900	126,600	77,900	873,300	2,940,900	91,167,230
September	714,050	128,450	741,200	156,600	37,050	65,300	137,250	78,600	874,850	2,933,350	88,000,650
October	673,600	113,400	714,550	167,050	39,700	64,550	137,400	77,950	876,600	2,864,800	88,809,500
November	640,300	110,050	702,350	171,350	36,750	63,700	135,400	76,550	706,500	2,642,800	79,285,050
December	650,000	111,600	687,850	161,350	38,700	61,850	140,650	76,150	698,200	2,626,350	81,417,060
1930											
January	671,050	111,700	672,650	178,300	37,650	58,500	142,250	73,850	688,850	2,634,800	81,574,650
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
Aug. 2	554,650	116,450	692,700	208,200	41,650	55,050	135,100	104,800	606,700	2,515,300	17,607,100
Aug. 9	560,650	117,950	643,450	207,550	42,600	55,500	132,050	103,350	616,100	2,480,200	17,361,400
Aug. 16	538,200	114,400	654,400	207,750	41,050	55,450	129,500	102,500	620,300	2,463,550	17,244,850
Increase	.....	.....	10,950	200	.....	.....	.....	.....	4,200	.....	.....
Decrease	22,450	3,550	.....	.....	1,100	50	2,550	850	.....	16,650	116,550

TEXAS
(Outside Gulf Coast)
PANHANDLE DISTRICT

	Aug. 16	Aug. 9
Carson County	9,300	9,300
Gray County	69,300	66,950
Hutchinson County	21,000	20,500
Wheeler County	600	500
Others	350	400
Total	100,550	97,650

NORTH TEXAS

Archer County	16,600	16,050
Burkburnett	7,200	6,250
Electra	11,700	12,600
Iowa Park-KMA	5,800	5,600
Montague and Cooke Cos.	9,850	9,700
Wilbarger	22,000	21,000
Others	1,750	1,700
Total	74,900	72,900

WEST CENTRAL TEXAS

Brown County	6,000	6,100
Callahan County	3,200	3,300
Coleman County	3,000	3,300
Eastland-Desdemona	5,450	5,500
Jack County	2,550	2,400
Palo Pinto County	500	500
Shackelford County	7,000	7,100
Stephens County	5,600	5,600
Throckmorton County	800	800
Young County	17,700	18,050
Others	1,800	1,100
Total	53,600	53,450

WEST TEXAS

Crane-Upton Counties	39,200	39,400
Crockett County	2,200	2,300
Ector	11,350	10,200
Howard County	23,600	23,550
Jones County	1,400	1,350
Mitchell-Scurry Cos.	2,100	2,150
Pecos County	3,500	3,400
Reagan County	21,700	21,600
Winkler County	75,000	79,100
Yates	102,550	103,000
Others	4,600	4,650
Total	287,200	290,700

EAST CENTRAL TEXAS

Boggy Creek	2,900	2,900
Corsicana-Powell	5,650	5,650
Currie	300	300
Mexia	4,400	4,350
Nigger Creek	250	200
Richland	200	200
Van Zandt	25,400	24,900
Wortham	900	900
Total	40,000	39,400

SOUTHWEST TEXAS

Chapman	10,000	.....
Dale	300	300
Darst Creek	44,500	45,000
Laredo District	13,800	13,700
Luling	9,900	9,900
Lytton Springs	900	900
Salt Flat	16,500	17,300
Somerset	1,600	1,600
Others	650	650
Total	98,150	89,350
T'tl Tex. (outside Gulf Coast)	654,400	643,450

TEXAS GULF COAST

Barbers Hill	18,100	17,900
Batson	1,100	1,200
Big Creek	4,000	4,100
Blue Ridge	1,600	1,600
Boling	1,100	1,100
Damon Mound	700	700
Esperson	2,500	2,400
Fannett	800	900
Goose Creek	4,800	4,700
Hankamar	2,600	2,800
Hull	7,900	8,350
Humble	20,400	19,100
North Dayton	850	900
Orange	2,100	2,100
Orchard	1,750	1,850
Pettus	6,300	6,400
Pierce Junction	14,150	11,800
Port Neches	2,100	2,150
Raccoon Bend	12,000	11,900
Refugio	29,700	30,650
Saratoga	1,000	1,000
Somerville	1,450	1,450
Sour Lake	2,300	2,200
South Liberty	3,700	3,700
Spindle Top	16,500	16,500
Sugar Land	11,800	11,850
West Columbia	4,000	4,700
Others	2,500	2,400
Total	177,800	176,400
Texas Total	832,200	819,850

OKLAHOMA

Allen	14,600	15,650
Asher	1,300	1,200
Blackwell	2,950	3,200
Bowlegs	15,200	14,000
Braman	3,300	3,300
Bristow Slick	15,350	15,350
Burbank	15,600	15,600
Carr City	6,950	5,000
Cromwell	7,500	7,700
Cushing	13,400	13,400
Davenport	1,200	1,200
Duncan District	9,550	10,100
Earlsboro	23,800	16,200
East Earlsboro	16,250	18,100
East Little River	11,050	15,150
East Seminole	2,450	2,400
Fox	1,150	1,250
Garber	4,600	4,300
Graham	3,300	3,300
Healdton	11,950	12,000
Hewitt	7,150	7,100
Hubbard	1,450	1,500
Konowa	15,500	24,000
Little River	27,350	23,050
Logan County	4,800	4,750
Maud	4,200	3,050
Mission	8,000	5,450
North Okmulgee	10,450	10,450
Oklahoma City	70,650	96,850
Osage (outside Burbank)	25,600	26,000
Papoose	2,450	2,700
Pearson	650	650
St. Louis	26,400	22,900
Sasakwa	5,400	7,200
Scholem-Alechem	13,500	15,000
Searight	7,900	7,450
Seminole	15,850	14,450
South Earlsboro	9,850	12,850
South Okmulgee	7,150	7,200
Thomas	700	650
Tonkawa	6,650	7,000
West Asher	5,750	4,100
Wewoka	3,800	3,500
Yale Jennings	7,900	7,900
Others	67,650	66,500
Total	538,200	560,650

CALIFORNIA

Dominguez	10,000	10,000
Elwood-Goleta	50,000	48,900
Huntington Beach	27,600	28,700
Inglewood	17,400	17,400
Kettleman Hills	12,500	13,000
Long Beach	104,400	102,000
Midway-Sunset	64,000	63,000
Santa Fe Springs	108,000	109,800
Seal Beach	20,400	20,300
Ventura Avenue	48,000	48,000
Others	158,000	155,000
Total	620,300	616,100

ARKANSAS

Champagnolle	4,750	4,750
El Dorado	4,250	4,200
Lisbon	950	950
Nevada	1,000	1,000
Smackover Heavy	37,300	37,300
Smackover Light	5,100	5,100
Stephens	950	950
Others	1,150	1,250
Total	55,450	55,500

KANSAS

	Aug. 16	Aug. 9
Augusta-Fox Bush	2,800	2,800
Churchill	3,700	3,800
Eldorado-Towanda	13,950	14,000
Florence-Covert	750	750
Greenwood County	18,900	19,000
Oxford	2,750	2,750
Peabody-Ebling	2,600	2,600
Rainbow Bend	1,050	1,050
Russell	3,250	3,100
Sedgwick	19,350	19,250
Voshell	7,800	11,850
Others	37,500	37,000
Total	114,400	117,950

NORTH LOUISIANA

Caddo Heavy	2,600	2,500
Caddo Light	9,350	9,500
Carterville	3,850	3,800
Cotton Valley	2,000	2,000
DeSoto-Red River	3,050	3,100
Haynesville	4,750	4,800
Holly	1,000	1,100
Homer	3,500	3,500
Urania	5,300	5,200
Zwolle	3,950	5,400
Others	1,700	1,700
Total North Louisiana	41,050	42,600

LOUISIANA GULF COAST

Bayou Boullion	200	1,400
East Hackberry	3,750	4,550
Edgerly	400	400
Evangeline	2,100	2,100
Hackberry	1,200	1,200
Lake Barre	1,200	1,300
Lockport	3,800	2,850
Port Barre	3,650	3,700
Sorrento	100	100
Sulphur Dome	3,500	3,600
Sweetlake	1,200	1,300
Vinton	6,050	7,000
Others	2,800	2,650
Total Louisiana Gulf Coast	29,950	32,150
Louisiana Total	71,000	74,750

WYOMING

Big Muddy	1,750	1,700
Elk Basin	750	900
Grass Creek	2,150	2,000
La Barge	1,950	1,750
Lance Creek	150	150
Lost Soldier	2,700	1,050
Oregon Basin	2,900	2,900
Rock River	2,150	2,100
Salt Creek	26,900	29,600
Others	4,450	4,200
Total	45,850	46,350

MONTANA

Cat Creek	1,150	1,150
Pondera	2,050	2,100
Sunburst	5,850	5,850
Others	50	50
Total	9,100	9,150

COLORADO

Florence	400	450
Fort Collins	1,300	1,250
Moffats (Craig)	1,150	1,150
Others	1,600	1,550
Total	4,450	4,400

NEW MEXICO

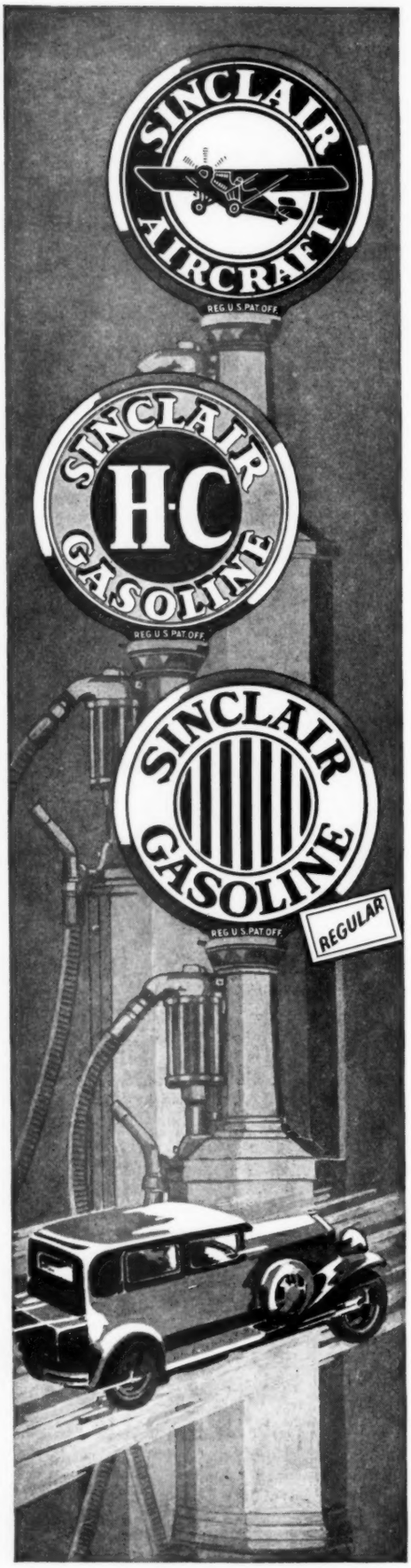
Artesia	650	750
Bal. Lea and Eddy Cos.	40,450	40,750
Hogback	450	450
Rattlesnake	1,300	1,300
Table Mesa	100	100
Others	150	100
Total	43,100	43,450
Total Mountain States	102,500	103,350

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)	119,500	122,000
Michigan	10,000	10,050
Total Eastern States	129,500	132,050

PRODUCTION SUMMARY

East of Rockies	1,740,750	1,760,900
Total U. S.	2,463,550	2,480,200



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SINCLAIR REFINING COMPANY, INC.
45 Nassau Street, New York
Atlanta Chicago Houston Kansas City

Crude Oil Price Quotations

Revised to August 19, 1930

EASTERN STATES

(Effective August 1, 1930)

*Bradford Grade	2.15
Penn Grade Oil in National Transit Lines (Pennsylvania)	2.10
Penn Grade Oil in Southwest Pennsylvania Lines (Penna.)	2.05
Penn Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.95
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	1.80
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.55
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Lines	1.30
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s Lines	1.50
Somerset Oil in Cumberland Pipe Line Lines (Kentucky)	1.37
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Effective Jan. 29, 1929)	.60
Wayne Dist. Oil in Cumberland Pipe Lines	1.24

*Posted by Tidewater Pipe Company.

CENTRAL STATES

(Effective June 26, 1930)

Posted by Ohio Oil Company

Illinois	$1.65
Indiana	1.32
Lima	1.55
Plymouth	1.23
Princeton	1.65
Wooster	1.65

WESTERN KENTUCKY

All grades	1.55

OKLAHOMA-KANSAS

(Effective April 10, 1930)

Below 25 gravity	$ .70
25 to 25.9 gravity	.70
26 to 26.9 gravity	.76
27 to 27.9 gravity	.82
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.10
32 to 32.9 gravity	1.15
33 to 33.9 gravity	1.185
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.255
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.325
38 to 38.9 gravity	1.36
39 to 39.9 gravity	1.395
40 to 40.9 gravity	1.43
41 to 41.9 gravity	1.465
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.535
44 and above	1.57

PANHANDLE

(Effective April 10, 1930)

GRAY COUNTY

Below 29 gravity	.755
29 to 29.9 gravity	.805
30 to 30.9 gravity	.855
31 to 31.9 gravity	.905
32 to 32.9 gravity	.955
33 to 33.9 gravity	1.005
34 to 34.9 gravity	1.055
35 to 35.9 gravity	1.09
36 to 36.9 gravity	1.125
37 to 37.9 gravity	1.16
38 to 38.9 gravity	1.195
39 to 39.9 gravity	1.23
40 to 40.9 gravity	1.265
41 to 41.9 gravity	1.30
42 to 42.9 gravity	1.335
43 to 43.9 gravity	1.37
44 and above	1.405

CARSON-HUTCHINSON COUNTIES

Below 32 gravity	$ .775
32 to 32.9 gravity	.825
33 to 33.9 gravity	.875
34 to 34.9 gravity	.925
35 to 35.9 gravity	.965
36 to 36.9 gravity	.995
37 to 37.9 gravity	1.03
38 to 38.9 gravity	1.065
39 to 39.9 gravity	1.10
40 to 40.9 gravity	1.135
41 to 41.9 gravity	1.17
42 to 42.9 gravity	1.205
43 to 43.9 gravity	1.24
44 and above	1.275

WHEELER COUNTY

Below 30 gravity	$ .755
30 to 30.9 gravity	.805
31 to 31.9 gravity	.855
32 to 32.9 gravity	.905
33 to 33.9 gravity	.955
34 to 34.9 gravity	1.005
35 to 35.9 gravity	1.04
36 to 36.9 gravity	1.075
37 to 37.9 gravity	1.11
38 to 38.9 gravity	1.145
39 to 39.9 gravity	1.18
40 to 40.9 gravity	1.215
41 to 41.9 gravity	1.25
42 to 42.9 gravity	1.285
43 to 43.9 gravity	1.32
44 and above	1.355

WEST TEXAS

(Effective April 10, 1930)

Crane-Upton, Crockett, Ector, Howard, Pecos and Winkler Counties and Lea County, N. Mex.

Below 25 gravity	$ .65
25 to 25.9 gravity	.68
26 to 26.9 gravity	.71
27 to 27.9 gravity	.74
28 to 28.9 gravity	.77
29 to 29.9 gravity	.80
30 to 30.9 gravity	.83
31 to 31.9 gravity	.86
32 to 32.9 gravity	.89

CALIFORNIA CRUDE OIL PRICES AT THE WELL
(EFFECTIVE JUNE 14, 1930)

Following are the current prices offered by Standard Oil Company for crude oil at the wells; (Price per barrel of 42 gallons in fields indicated)

Gravity	Ventura*	Signal Hills	Alamitos Heights Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ .70	$ .70	$ .70	$ .70	..	$ .55	$ .55	$ .55	$ .55	$ .55	$ .55
15-15.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
16-16.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
17-17.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
18-18.9	.75	.76	.76	.76	.76	.76	..	..	.76	.76	.76	.71	.76	..	.55	.62	.62	.62	.62	.62
19-19.9	.80	.82	.82	.82	.82	.82	..	..	.82	.82	.82	.77	.82	..	.55	.70	.70	.70	.70	.70
20-20.9	.85	.88	.88	.88	.88	.88	..	..	.88	.88	.87	.83	.87	..	..	.78	.78	.78	.78	.78
21-21.9	.90	.94	.94	.94	.94	.94	..	..	.94	.94	.93	.90	.93	.92	..	.86	.86	.86	.86	.86
22-22.9	.97	1.00	1.00	1.00	1.00	1.00	..	..	1.00	1.00	.98	.97	.98	.95	..	.94	.94	.94	.94	.94
23-23.9	1.05	1.07	1.07	1.07	1.07	1.07	..	..	1.07	1.07	..	1.05	1.04	1.01	..	1.02	1.02	1.02	1.02	1.02
24-24.9	1.08	1.14	1.14	1.14	1.14	1.14	1.14	..	1.14	1.14	..	1.11	1.10	1.07	..	1.09	1.09	1.09	1.07	1.07
25-25.9	1.13	1.21	1.21	1.21	1.21	1.21	1.19	..	1.21	1.21	..	1.17	1.16	1.13	..	1.16	1.16	1.16	1.12	1.12
26-26.9	1.18	1.28	1.28	1.28	1.28	1.28	1.24	..	1.28	1.28	..	1.23	1.23	1.19	..	1.23	1.23	1.23	1.17	1.17
27-27.9	1.23	1.35	1.35	1.35	1.35	1.35	1.29	..	1.35	1.35	..	1.29	1.30	1.25	..	1.30	1.30	1.30	1.23	1.22
28-28.9	1.28	1.42	1.42	1.42	1.42	1.42	1.34	..	1.42	1.42	..	1.35	1.37	1.31	..	1.35	1.35	1.35	1.27	..
29-29.9	1.33	1.46	1.46	1.46	..	1.46	1.39	..	..	1.46	..	1.38	1.41	1.37	..	1.41	1.41	1.41	1.31	..
30-30.9	1.39	1.50	1.50	1.50	..	1.50	1.45	..	..	1.50	..	1.41	1.45	1.43	..	1.47	1.47	1.47	1.35	..
31-31.9	1.45	1.55	1.55	1.55	..	1.55	1.51	..	..	..	..	..	..	1.49	..	1.53	1.53	1.53	1.39	..
32-32.9	1.51	1.60	1.60	1.60	..	..	1.57	..	..	..	..	..	..	1.55	..	1.59	1.59	1.59	1.43	..
33-33.9	1.58	..	..	..	..	..	1.64	..	..	..	..	..	..	1.60	..	1.65	1.65	1.65	1.47	..
34-34.9	..	..	..	..	..	..	1.71	1.32	..	..	..	..	..	1.65	..	..	..	1.71	1.51	..
35-35.9	..	..	..	..	..	..	1.78	1.39	..	..	..	..	..	1.70	..	..	..	1.77	1.55	..
36-36.9	..	..	..	..	..	..	1.84	1.46	..	..	..	..	..	1.75	..	..	..	..	..	..
37-37.9	..	..	..	..	..	..	1.90	1.53	..	..	..	..	..	1.80	..	..	..	..	..	..
38-38.9	..	..	..	..	..	..	1.96	1.60	..	..	..	..	..	1.85	..	..	..	..	..	..
39-39.9	..	..	..	..	..	..	2.02	1.66	..	..	..	..	..	1.90	..	..	..	..	..	..
40-40.9	..	..	..	..	..	..	2.08	1.72	..											
41-41.9	..	..	..	..	..	..	2.14	1.78	..											
42-42.9	..	..	..	..	..	..	2.20	1.84	..											

KETTLEMAN HILLS—55 degrees Gravity and above 1.65 per barrel. *Union Oil Company.
General Petroleum Posts following prices 11-39.9 Gr. 50c, 14-22.9 55c at Kern Front, Fruitvale, Mt. Poso Creek and Rd. Mountain districts.

(Continued on page 82)

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 81*)

33 to 33.9 gravity	.92
34 to 34.9 gravity	.95
35 to 35.9 gravity	.98
36 and above	1.01

Magnolia Petroleum Company posts in Crane, Upton and Winkler Counties. Southern Crude Oil Purchasing Company posts only in Crane, Upton and Winkler Counties.

HOWARD AND GLASSCOCK COUNTY CRUDE

(Effective April 10, 1930)

Below 25 gravity	$ .65
25 to 25.9 gravity	.68
26 to 26.9 gravity	.71
27 to 27.9 gravity	.74
28 to 28.9 gravity	.76
29 to 29.9 gravity	.78
30 to 30.9 gravity	.80
31 to 31.9 gravity	.82
32 to 32.9 gravity	.84
33 to 33.9 gravity	.86
34 to 34.9 gravity	.88
35 to 35.9 gravity	.90
36 and above	.92

MARKHAM

The Texas Company

(Effective April 11, 1930)

All grades	$ .85

CORSICANA HEAVY

All grades	$ .80

SALT FLAT AND DARST CREEK

All grades	$1.15

SOUTH TEXAS

Mirando	$ .85
Luling	.85

NORTH AND CENTRAL TEXAS

(Effective April 10, 1930)

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona, Lytton Springs, and Van*

Below 25 gravity	$ .72
25 to 25.9 gravity	.77
26 to 26.9 gravity	.82
27 to 27.9 gravity	.87
28 to 28.9 gravity	.92
29 to 29.9 gravity	.97
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.07
32 to 32.9 gravity	1.12
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.255
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.325
38 to 38.9 gravity	1.36
39 to 39.9 gravity	1.395
40 to 40.9 gravity	1.43
41 to 41.9 gravity	1.465
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.535
44 and above	1.57

*Pure Oil Company, July 9, 1930.

GULF COAST

(Effective April 10, 1930)

Grade "A" all companies	$1.15

Grade "B"

Below 25 gravity	$1.00
25 to 25.9 gravity	1.03
26 to 26.9 gravity	1.06
27 to 27.9 gravity	1.09
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.15
30 to 30.9 gravity	1.18
31 to 31.9 gravity	1.21
32 to 32.9 gravity	1.24
33 to 33.9 gravity	1.27
34 to 34.9 gravity	1.30
35 to 35.9 gravity	1.33
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.39
38 to 38.9 gravity	1.42
39 to 39.9 gravity	1.44
40 to 40.9 gravity	1.46
41 to 41.9 gravity	1.48
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.52
44 and above	1.54

CLASSIFICATIONS OF GULF COAST CRUDE

The Texas Company: GRADE A—Beaume gravity not over 26.0 degrees at 60 degrees Fahrenheit; sulphur not over 0.5 per cent; in distilling 500 cc. of the crude that part of the distillate cut between 65 per cent off and 85 per cent off shall have a pour test of zero or lower. GRADE B—All Gulf Coast heavy crudes which do not meet tests for Grade "A" or for Gulf Coast light.

Humble Oil & Refining Company: GRADE A—All crude conforming to the following tests: viscosity not less than 100 seconds Saybolt at 100 degrees Fahrenheit; sulphur not over .4 per cent; Beaume gravity not over 25 at 60 degrees Fahrenheit. Cold tests of distillates having a viscosity of 1000 seconds at 100 degrees Fahrenheit shall not be over 5 degrees Fahrenheit. GRADE B—Embraces all Coastal crude which does not meet the tests for "A" grade crude.

Gulf Pipe Line Company: GRADE A—Beaume gravity not over 24 at 60 degrees Fahrenheit; viscosity not less than 100 seconds universal Saybolt at 100 degrees Fahrenheit; and sulphur not over 0.4 per cent. The yield of 250 viscosity reduced distillate at 100 degrees Fahrenheit not less than 30 per cent, and this 30 per cent not heavier than 20 Beaume, and its pour test not above zero Fahrenheit. The reduced distillate to be secured by reducing the crude with fire and steam until the bottoms have a flash of not less than 540 degrees Fahrenheit, and not more than 560 degrees Fahrenheit open cup, and the entire distillate obtained in this way reduced to a distillate of 250 viscosity. The 10 per cent cut in the original distillate having an average viscosity of 500 seconds at 100 degrees Fahrenheit to have a pour test not higher than 5 degrees Fahrenheit. GRADE B—Embraces crude which does not meet test for "A" grade.

Sun Pipe Line Company: GRADE A—Viscosity not less than 100 seconds at 100 degrees Fahrenheit Saybolt. Sulphur not over .4 per cent. Beaume gravity not over 25 at 60 degrees Fahrenheit. Cold Test: of distillates having viscosity of 1000 seconds at 100 degrees Fahrenheit shall not be over 5 degrees Fahrenheit A. S. T. M. Method. GRADE B—All Coastal crudes which do not meet specifications for Grade A crude.

REFUGIO

(Effective April 10, 1930)

Below 25 gravity (heavy)	.85

REFUGIO (Light)

Same as Gulf Coast 25 gravity and above.

PETTUS

(Effective April 10, 1930)

All grades	$1.40

BRENHAM

(Effective March 1, 1930)

All grades	.95

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

WYOMING-MONTANA

(Effective April 11, 1930)

Wyoming

Byron	$1.33
Ferris	1.60
Elk Basin	1.55
Grass Creek	1.55
Rock Creek	1.35
Lost Soldier	1.05
Lance Creek	1.63
Mule Creek	1.20
Notches	.65
Big Muddy	1.38
Osage	1.65
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.65
Lander	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

SALT CREEK

Midwest Refining Company

29 to 29.9 gravity	$ .90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 and above	1.23

MONTANA

(Effective Feb. 15, 1930)

Sunburst	$1.65
Cat Creek	1.48
Lake Basin	2.20

NEW MEXICO

(Effective April 11, 1930)

Artesia	1.05
Hog Back	1.43
Maljamar	.95
Jal and Lea	*

(*) West Texas price scale used by The Texas Company and Humble Oil & Refining Co.

CANADA

(Effective June 28, 1930)

Oil Springs	1.95
Petrolia	2.02

LOUISIANA-ARKANSAS

(Effective April 11, 1930)

Homer, Haynesville, Caddo, El Dorado, DeSoto and Crichton and Cotton Valley*

Below 28 gravity	$ .87
28 to 28.9 gravity	.92
29 to 29.9 gravity	.97
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.07
32 to 32.9 gravity	1.12
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.255
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.325
38 to 38.9 gravity	1.36
39 to 39.9 gravity	1.395
40 to 40.9 gravity	1.43
41 to 41.9 gravity	1.465
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.535
44 gravity and above	1.57

*Shreveport-Eldorado's postings stop at above 40 gravity.

The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.

The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS

Below 28 gravity	$ .76
28 to 28.9 gravity	.81
29 to 29.9 gravity	.86
30 to 30.9 gravity	.91
31 to 31.9 gravity	.96
32 gravity and above	1.01

SMACKOVER

Below 24 gravity	$ .90
24 and above	1.05

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ELWOOD—		
Caroline Spalding, Blue Goose 93-4.	500	3640
Barnsdall Oil Co., Permit 88-3	6000	3440
Seaward Oil Co., Permit 91-2	500	3650
LONG BEACH—		
Bixby and McFadden, Woodward 1.	1000	7085
R. R. Bush Oil Co., Barnes 3	25	7620
Dabney-Johnston Oil Corp., No. 47	325	7245
Davis Investment Co., No. 16	2500	6840
Petroleum Securities Co., Graham 2	125	6685
Richfield Oil Co., Haas 1	75	5255
Wilhelm 1	20	5370
Roberts and Becker, No. 1	100	7085
The Texas Co., Robinson 4	100	6405
Two In One Oil Co., Fee 2	60	7040
MIDWAY—		
Standard Oil Co., No. 9K-4	100	3898
POTRERO—		
George F. Getty, No. 9-4	125	5328
No. P-1	*	5750
No. P-2	*	5155
Richfield Oil Co., Coffin 1	200	6260
Sloan 1	600	6080
RICHFIELD—		
Continental Oil Co., Santa Fe 4	160	4550
Ross-Schlachter 2	150	4720
ROUND MOUNTAIN—		
Shell Oil Co., Jewett 13	250	1650
Honolulu Consolidated Oil Co., No. 99	475	2340
SANTA FE SPRINGS—		
The Texas Co., Matern 3-16	250	4560
VENICE-PLAYA DEL REY—		
Elmer Oil Co., Venice 2	3600	6035
C. C. Beem, Del Aqua 1	300	3985
The Ohio Oil Co., Block J-1	300	3835
VENTURA—		
Associated Oil Co., V. L. W. 10	4000	7750
WEST COYOTE—		
Standard Oil Co., Murphy-Coyote 104	450	4400

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
M. F. Whitehill, Whitehill 1	¶½	1260
Carnegia Natural Gas Co., Ames 3436	¶1¼	1902
Hathaway 1	¶½	2731
Moredock 1	¶¼	2981
BUTLER COUNTY—		
Carnegia Natural Gas Co., Lindley 5	20	....
T. W. Phillips Gas & Oil Co., Harvey 6	4	2097
Harry Kreider & Co., Cook 2	5	2245
GREENE COUNTY—		
Natural Gas Co. of W. Va., Patterson 2	¶¼	....
ALLEGHENY COUNTY—		
Unknown parties, Gisher 1	*	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
CALHOUN COUNTY—		
F. F. McIntosh & Co., Wytsell 1	¶½	2290
Southeastern Gas Co., Sturm 6	¶1	2227
W. H. Daley & Co., Maze 1	¶1	1775
Great Elk Oil & Gas Co., Bachman 1	¶1¼	....
RITCHIE COUNTY—		
Philadelphia Gas Co., Hess 1	*	....
Moyer, Lee & Co., Webb 1	*	1850
D. M. Heckert & Co., McGill 1	*	1857
WYOMING COUNTY—		
Ritter Lumber Co., Ritter 1	¶2	4002
WIRT COUNTY—		
R. C. Wagner & Co., Kemp 1	¶¼	2193
BOONE COUNTY—		
Pond Fork Oil & Gas Co., Freeman & Co. 1	¶¼	....
MONONGALIA COUNTY—		
J. B. Nuss & Co., Barrack Hrs. 1	4	2395
KANAWHA COUNTY—		
United Fuel Gas Co., Unknown 4262	¶¼	....

Tabulation and Comparison on page 62

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
DAVIESS COUNTY—		
S. M. Sirman, Atherton 3	75	....
Atherton 4	350	....
Atherton 2	*	....
Evans & Garrison, Clark 6	¶¼	....
Johnson Oil & Refg. Co., Karn 1	15	....
Jetsan Oil Co., Hinton 2	¶1	....
C. E. Daugherty & Co., Stimson 2	75	....
Eastern Gulf Oil Co., Christian 2.	10	....
OHIO COUNTY—		
James C. Ellis, McKinley 3	20	....
Bailey & Mayer, Friendship 1	25	....
Brown & Co., Hickey 5	18	....
Lowman, Daley & Co., Feenster-Wimsatt 4	20	540
Three C's Oil & Gas Co., Rhodes 4	40	684
F. H. Hupp & Co., Cambron 1	¶2½	1075
Hupp, Duff & Co., Smiley 2	*	564
Smiley 3	¶¼	480
H. C. Smith Co., Bashara 1	*	940
Hall & Garrison, Helton 2	*	680
Dearborn Oil Co., Johnson 2	*	785
CLAY COUNTY—		
Petroleum Exploration Co., Spurlock 1	¶½	....
Rawlings 1	¶¾	....
ALLEN COUNTY—		
Meeley Oil Co., Taylor 1	200	456
McLEAN COUNTY—		
Creek Drilling Co., Morris 1	150	....
Morris 2	*	....
Howard 1	¶¼	....
Miller & Damron, Dunn 1	250	....
George Engle, Sandefor 1	*	....
HENDERSON COUNTY—		
Wittmer Oil & Gas Co., Jackson 4.	2	....
Pearson Petroleum Co., Parks 1	5	....
Niagara Oil & Gas Co., Tillison 1	15	....
K. M. Dole, Walden 1	*	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
Don E. Williams & Co., Hutchens 3	2	664
J. C. Garner & Co., Larcomb 1	2	1710
Merl Schramm & Co., Cummons 13	7	284
MONROE COUNTY—		
Lois A. Timblinn & Co., Bode 1	5	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ATHENS COUNTY—		
Orange Gas Co., Chapman 1	*	1100
Gross, Freebault & Co., Knowlton 2	*	1159
Ohio Fuel Gas Co., Bean 1	¶¼	1774
Jones 2	¶¼	1423
Grimes 3	¶¼	1585
TUSCARAWAS COUNTY—		
East Ohio Gas Co., O. Quillan 2	8	3473
Gordon Oil Co., Kess 1	*	3554
Davis 2	30	3495
Federal Oil & Gas Co., Reichman 1	¶¾	4991
PERRY COUNTY—		
Hopewell Gas & Fuel Co., Lehman 1	¶3½	3043
Perry Sturm & Co., Kullman 1	¶¼	2960
The Pure Oil Co., Diller 1	2	3494
HOCKING COUNTY—		
City Natural Gas Works, Ellinger 1	¶¼	2553
Ohio Fuel Gas Co., Wilkes 1	*	2269
Ohio Fuel Gas Co., Sunday Creek Coal 95	¶¼	1004
LICKING COUNTY—		
Hope Construction & Refg. Co., Minor-Obannon 2	55	2823
McClay Bros., Hoover 5	2	709
SUMMITT COUNTY—		
Witmer & Co., Witmer 1	¶2¾	4118
East Ohio Gas Co., Kiefer 2	¶2	3621
COSHOCTON COUNTY—		
Ohio Oil Co., Rhodes 4	60	3568

Company, Well and Location	Initial Production Bbls.	Depth
ASHLAND COUNTY—		
Robinson & Co., Wolfe 5	25	709
KNOX COUNTY—		
H. G. Hammond, Hammond 7	*	637
MUSKINGUM COUNTY—		
The Preston Oil Co., Stakeley 1	¶¾	3514
LORAIN COUNTY—		
Wiser Oil Co., Baus 1	*	....
WAYNE COUNTY—		
M. and S. Burton, Stone 3	*	3392
BELMONT COUNTY—		
McBride & Co., Hadsell 2	*	1430

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ALLEN COUNTY—		
C. A. & F. J. Peavey, Hoover 5	10	1374
Roalman & Pease, Leedy 4	40	1362
WYANDOT COUNTY—		
Coyle & Jones, Bell 1	¶¼	1442
HARDIN COUNTY—		
Ohio Fuel Gas Co., Robinson 3	¶½	1396

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
GIBSON COUNTY—		
Indiana Oil & Gas Corp., Colvin 1.	*	1640
PIKE COUNTY—		
C. C. Taliaferro Jr., Fee 1	¶3¼	1090
R. J. Rendal, Chandler 5	*	1069

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
CRAWFORD COUNTY—		
Wilson & Co., Newlin 3	2	879
McBride, Inc., Frye 1	6	997
WABASH COUNTY—		
Robinson Oil Co., Robinson 2	*	2360

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
NEWYAGO COUNTY—		
Newyago Oil & Gas Co., Bates 1	*	1450
Atlantic Exploration Co., Bridges 1.	*	5463
CASS COUNTY—		
Blair & Miller, Stuttman 3	*	800
OTTAWA COUNTY—		
Wright Oil Co., Kluting 1	*	5500

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Empire O&R., Houston 20, sw c, 19-26-5e	75	2712
Agate Oil & Gas Co., Deathrage 1, sw nw se, 20-29-4e	*	3040
Connell et al, Nixon 1, ne c, 23-27-5e	*	2790
Lario O&G Co., Gilwick 1, se nw sw, 6-27-4e	*	3040
COFFEY COUNTY—		
Kinsley et al, Powers 1, sw c, 17-22-14e	*	loc.
ELLIS COUNTY—		
Streeter and Stearns, Luker 1, sw c ne, 26-13-20w	*	4078
McPHERSON COUNTY—		
Gypsy Oil Co., Kinney 3, nw sw sw, 34-20-3w	1025	3386
Slick, Pryor & Lockhart, Grattan 2, sw c nw, 34-20-3w	1100	3467
Barnsdall Oil Corp., Krehbiel 6, nw sw se, 4-21-3w	700	3421
Shell Pet. Co., Neyfeldt 1, nw c, 15-21-3w	440	3400
MORTON COUNTY—		
Argus Production Co., Burton 1, c se, 11-38-40w	¶1½	2700
Mangel 1, c ne, 20-33-39w	¶8	2704
Morgan 1, 6-33-39w	¶2	2750
SEDGWICK COUNTY—		
Blankenship Pet. Corp., Shaffer 1, ne c nw, 30-27-2e	1800	2970
Derby Oil Co., Cloud 1, c e½ se se sw, 1927-2e	1525	3009
E. F. Jones et al, Lydrisse 1, ne se ne, 22-26-2e	*	3407
SUMNER COUNTY—		
Champlin O&R, Love 5, sw nw sw, 9-30-2w	30	3230

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Wirt Franklin Corp., Hooks 1, nw c ne, 24-1s-3w	545	2158
Schermerhorn et al, Crockett 5, sw ne sw, 23-1s-3w (owdd)	20	2638
CLEVELAND COUNTY—		
Continental Oil Co., Sudik 3, nw ne ne, 6-10-2w	25800	6692
Cromwell-Franklin Oil Co., Reynolds 1, ne c sw, 6-10-2w	*	4681
COAL COUNTY—		
Blackwell O&G, Gumm 1a, sw ne nw, 26-3n-9e	*	1790
COMANCHE COUNTY—		
Floyd Cooper, Hallum 4, cnl se sw, 3-3n-10w	*	1440
COTTON COUNTY—		
Gant and Garvin, Patterson 6, ne c nw nw nw, 1-2s-10w	6	2205
Shasta Oil Co., Moore 5, sw c se nw sw, 2-2s-10w	10	2205
CREEK COUNTY—		
J. H. Wright, Est., Pokey 24, nw c, 24-17-10e	20	1909
Lima O&G, Bigpond 1, nw ne se, 36-15-7e	30	3299
GRADY COUNTY—		
Natural Gas Producing Corp., Ridley 1, se c nw se, 25-4-8w	*	2519
HUGHES COUNTY—		
Iglehart, Brooks 2 "B," c nw sw, 28-9-10e	¶5	3115
Independent O&G et al, Neal 1, ne c nw, 25-9-9e	*	3539
LATIMER COUNTY—		
Midwestern O&G, Hulsey 1, se ne sw, 1-6-22e	¶17	1684
MARSHALL COUNTY—		
F. W. Merrick, Null 22, nw c se nw, 24-5s-5e	3	617
Bilbo Oil Corp., Davis Sullivan 5, ne c sw nw, 30-5s-6e	75	664
Goddard Oil Co., Marshall 4, ne c sw, 30-5s-6e	18	631
Max Westheimer, Davis-Sullivan 7, se c sw se nw, 30-5s-6e	70	651
F. W. Merrick, Null 21, nw c ne se nw	20	682
Bilbo Oil Corp., Taliaferro 14, ne c nw se se, 14-5s-5e	30	621
Otto Reynolds, Iliff 1, nw c se, 26-5s-5e	*	600
Fleming and Kimbrell, Null 7, se c sw ne nw, 24-5s-5e	*	1375
MUSKOGEE COUNTY—		
Mack Drilling Co., Richards 5, se c ne nw ne, 33-16-15e	30	1527
P. Boyle, Howard 1a, se c nw se, 19-15-16e	30	1256
J. Lyon et al, Dean 1, nw se ne, 23-14-17e	*	1712
Beland Oil Co., James 9, c sl ne se, 18-14-17e	*	1516
Cosey and Miller, Jackson 1a, se c sw nw, 8-13-16e	*	1709
Becker and Hutchinson, Mayes 1, c se ne, 16-12-19e	*	620
OKFUSKEE COUNTY—		
Transcontinental Oil Co., Tiger 1, se ne ne, 26-10-10e	*	3619
Atlantic Oil Prod. Co., Jimboy 1, se ne ne, 11-11-10e	30	3242
Wells et al, Stillwell 1, se ne ne, 14-10-11e	40	2180
T. P. McAdams, Pincham 6, c se nw, 1-10-11e	50	1693
OKLAHOMA COUNTY—		
I. T. I. O., Jones 13, sw c nw, 31-11-2w	36168	6607
Phillips Pet. Co., Jones 1, sw c ne ne sw, 1-11-3w	6075	6444
T. B. Slick and Atkinson, Baker 1, nw c, 1-11-3w	2100	6385
Slick and Atkinson, Milner 2, cnl, se sw nw, 1-11-3w	12886	6501
Slick et al, Classen 1, nw se nw, 2-11-3w	2568	6608
Wirt Franklin Pet. Corp., Holder 1, se c sw, 2-11-3w	1307	6550
I. T. I. O., Coppinger 1, ne c nw, 11-11-3w	0010	6600
Corff 1, se c sw, 11-11-3w	2701	6532
Cromwell-Franklin Oil Co., Trosper Park 23, se c nw, 12-11-3w	14623	6320
I. T. I. O. Trosper 2, ne sw ne, 14-11-3w	14720	6515
Hugh Trosper 3, ne nw ne, 14-11-3w	7002	6540
I. T. I. O. and T. B. Slick, Huddleston 1, se sw nw, 14-11-3w	2456	6586
Coline Oil Co., Clauer 13, ne nw se, 25-11-3w	981	6418
I. T. I. O., Peterson 5, nw ne sw, 25-11-3w	4078	6606
Sinclair O&G, School land 2, se ne se, 36-11-3w	520	6733
School land 12, sw se ne, 36-11-3w	36030	6658
I. T. I. O., MKT 1, se c sw, 35-12-3w	4317	6555
OKMULGEE COUNTY—		
Morrow et al, West 1a, ne c se, 26-12-12e	*	810
OSAGE COUNTY—		
I. T. I. O., 433, nw se ne, 6-26-12e	¶3	1632
Winona Oil Co., 16, cel ne, 20-29-9e	10	1536
Peters Petroleum Co. et al 1, se c nw, 21-23-7e	*	3080
PONTOTOC COUNTY—		
Benedum & Trees, Burk 1, ne nw nw, 33-5-5e	110	2354
Browall 3, sw ne nw, 31-5-5e	70	2636
Mole 9, nw c ne, 31-5-5e	230	2630
POTTAWATOMIE COUNTY—		
Payne Drilling Co. et al, Bullock 3, sw se ne, 22-6-3e	3944	3570
I. T. I. O., Davidson 3, se sw nw, 23-6-3e	1850	2497
Wilcox O&G, Warren 3, ne nw sw, 23-6-3e	2045	3532
ROGER MILLS COUNTY—		
J. J. Rook et al, Davis 1, c nw ne, 4-11-26w	*	2840
SEMINOLE COUNTY—		
Ligon and Todd, Townlot 1, sw ne ne, 30-8-8e	*	3367
Sinclair O&G, Caesar 1, nw se sw, 21-6-6e	*	2736
Carter Oil Co., Coker 5, sw ne sw, 2-8-5e	1368	4201
Gypsy Oil Co., Ciker 3, se nw sw, 2-8-5e	1720	4208
Texas Co., Chilcoat 4, sw c nw, 4-7-7e	17	3210
Hilton Phillips et al, Hyde 4, ne sw ne, 20-6-6e	4335	2976
Gypsy Oil Co., Harjo 2, ne c sw, 20-6-6e	645	2938
Sinclair O&G, Caesar 2, sw se sw, 21-6-6e	¶2	2617
Delaney & King, Gilmore 1, nw c se, 3-5-8e	7	950
TULSA COUNTY—		
Boyd et al, Horn 1a, nw ne sw, 23-18-14e	*	1368
WAGONER COUNTY—		
R. L. North, Canard 4, sw ne se, 31-18-17e	¶5½	959

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
OUACHITA COUNTY (Smackover)—		
W. R. Keever et al, Hardin A-2, 27-15-16 (sec. comp.)	8	2000
UNION COUNTY (Smackover)—		
Skelly Oil Co., Bilyew A-2, 8-16-15 (sec. comp.)	38	2697

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Ark. Fuel Oil Co., Floyd 1, 25-23-12	5	3176
National Drilling & Prod. Co., Matlock 1, 26-23-12	*	3200
Louisiana G&F Co., Thigpen-Herold 7, 19-17-11	¶1¼	3025
MOREHOUSE PARISH—		
Louisiana G&F Co., Archie 1, 22-20-4e	¶9¼	2135
Southern Carbon Co., Fee 56, 15-20-4e	¶31½	2156
OUACHITA PARISH—		
Ark. La. P. L. Co., Potts 2, 30-19-4e	¶2	2185
RICHLAND PARISH—		
Palmer Corp., Brown 1, 27-16-6e	¶3	2456
Richland Prod. Co., Hale 1, 22-16-6e	¶36¼	2450
SABINE PARISH (Zwolle)—		
Allen & Thompson, Baptist Church 1, 31-8-12	*	2590
Glassell & Merren, Thomas 1, 31-8-12	*	2600
Loring Oil Co., Bowman-Hicks 4, 34-8-12	*	2669
Olsan Bros., Boone 2, 33-8-12	*	2466
UNION PARISH—		
Greenwood Prod. Co., Norsworthy 3, 9-21-3e	¶13¼	2205

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
AVOCA—		
La. Ld. & Explo. Co., Chas. W. Fox 1, 35-16s-12e, St. Mary Parish	*	6050
BAY ST. ELAINE—		
The Texas Co., Bay St. Elaine 4	*	5600
CAILLOU ISLAND—		
The Texas Co., Caillou Island State 3	*	3037
EVANGELINE—		
The Texas Co., Rayne Heirs 5, s edge of dome	*	8730
HACKBERRY—		
Yount-Lee, Vincent 3	20	3840
JEFFERSON ISLAND—		
Jefferson Lake Oil Co., Lake Peigneur 7	*	860
Lake Peigneur 8	*	765
LOCKPORT—		
Vacuum-Gulf, Frieberg & Wolf 5	*	5675
SULPHUR—		
Union Sulphur Co., Fee 751, wo	*	
Fee 760	1000	4867
SWEET LAKE—		
Pure, Yount-Lee 9	1000	6815
VINTON—		
Vinton Pet. Co., Matilda Gray 3	250	3300

TEXAS

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
AUSTIN BAYOU—		
Rycade & Amerada, Rapid City 1, 2 mi s Danbury, Brazoria Co.	*	6285
BARBERS HILL—		
Sun, J. Wilburn 8	1000	5230
Mills Bennett, Barrow 10	160	4821
BIG CREEK—		
Gulf, T. W. Davis 49, dd	1100	3850
Navarro Oil Co., Hausler 1, dd	*	3350
BLUE RIDGE—		
Humphreys Corp., West-Schenck 1, dd	690	3470
ESPERSON—		
Cranfill-Reynolds Co., Moores Bluff B-1, Lewis Davis sur	*	4700
HULL—		
Republic Prod. Co., Dolbear 75, dd	100	2920
HUMBLE—		
Sun Oil Co., Bender 9	675	3908
Bender 10	1500	4430
Rio Bravo Oil Co., Fee 4	600	3898
MOORES FIELD—		
Gulf, Moore 23	450	4130
Moore 24	800	4035
MOSS BLUFF—		
Shell, Herff 1, Jean Barry sur	*	5626
PETTUS—		
Ark. Nat. Gas Co., A. J. Kimball 1	*	3863
PIERCE JUNCTION—		
Navarro Oil Co., Cain 4-A, dd	750	4550
RACCOON BEND—		
Humble-Valley, R. Hardy B-2, Waller Co., J. E. Groce sur	390	3202
Sherrod 2	215	3157
REFUGIO—		
Independent O&G Co., M. F. Lambert 1	*	6375
L. L. Smith, Sumner 1	250	5471
The Texas Co., Shelton 2	250	5467
SAN FELIPE—		
Kirby Pet. Co., Rogers 2	*	3432
SARATOGA—		
Rio Bravo Oil Co., Cotton 95-A	65	550
SOUR LAKE—		
The Texas Co., Fee 306	200	2150
SPINDLE TOP—		
Yount-Lee, McFadden 140	*	4070

TEXAS

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
CARSON COUNTY—		
Shamrock O&G Co., M. C. Thompson 1	¶17	3404
GRAY COUNTY—		
Adams-Prince-Tharp, Morse-Canton 1	150	2540
Cockrell-McIlroy Oil Co., Allan 1..	*	3330
H. Horner 1	350	3251
Empire Gas & Fuel Co., W. C. Archer 1-C	250	3243
Humble O&R Co., Combs-Worley 8	¶4-790	2860
Magnolia Pet. Co., S. Faulkner 7..	15	2725
Operators Oil Co., Bowers-Texmore 3	¶15	2930
Prairie O&G Co., D. W. Carey 1..	115	3317
WHEELER COUNTY—		
Lone Star Gas Co., C. A. Ritchey 1	¶64	2012
Long et al, W. L. Willington 1 ...	¶14	2175
Murchison-Fain-McGaha, J. W. Grogan 1	¶15	1508
J. D. Purcell 2	¶46	2461
Northern Texas Utilities Co., Williams-Laycock 1	¶33	1954
Wischkamper Bros. et al, J. W. Curry 4	¶3	1605

NORTH TEXAS

ARCHER COUNTY—		
Beard & Hammond, Inc., Terrell 1	*	803
F. P. Cullum et al, Falls County 4-A	*	900
State Drlg. Co.-King Royalty Co., Ward Bros. 1	*	1000
Chancellor 1	*	1501
CLAY COUNTY—		
Temple et al, Edrington 1	*	1158
COOKE COUNTY—		
Danciger O&R Co.-Staniforth, Inglish 1	*	2579
GRAYSON COUNTY—		
C. E. Marshall et al, Taylor 1	*	1018
THROCKMORTON COUNTY—		
M. L. Hays et al, Wright 1	*	1506
Magnolia Pet. Co., Richards 1	*	3685
WICHITA COUNTY—		
Pat Flynn et al, Woodward 1	*	3695
WILBARGER COUNTY—		
Hoover Scientific Dev. Co., Waggoner 1-A	*	2070
McCarty Oil Co., Waggoner 1-B...	*	2443
Phillips Pet. Co., Waggoner 4-RR...	50	2563
Pigg et al, Waggoner 1	*	2515
Zenith Oil Co., Dill 4	*	2236
YOUNG COUNTY—		
Ard & Son, Terrell 1	10	693
Continental Oil Co., Whitley 1 ...	*	5063
Lindsey Drlg. Co., Lisle 1	*	1130
Long et al, Fawks 1	20	3912
McDonald & Campbell, Van Hemert 1	*	760
McMeans & Williams, Kay 1	*	598
Sparks 1	*	557
Nash-Windfohr et al, Ware 1-B....	35	3784
Geo. L. Pace et al, Winkler 1	*	1305
Paramount Oil Roy., Inc., Choate 1	*	700
A. H. Parks et al, Wallace 1	*	600
States Oil Corp., McBee 1	*	4215
Sid Swink et al, Balknap 1	10	718
T. E. Trunick et al, Routin 1	*	760
J. H. Watson et al, A. C. Watson 1	*	700
Willis & Terrell, Cathright 1	*	752
Wise-Jackson-Devonian Oil Co., Brown 1	*	976

CENTRAL WEST TEXAS

BROWN COUNTY—		
Ann B. Gordon Oil Co., Cannon 7-A	5	1213
Nimrod Oil Co., Leslie 2	10	1345
CALLAHAN COUNTY—		
Holden-Wakefield et al, Hobbs 1..	*	1060
Meredith & Benton, Berry 1	*	932
COLEMAN COUNTY—		
Lloyd Oil Corp., Bartholomew 13..	25	1440
EASTLAND COUNTY—		
Lone Star Gas Co., Mitcham 1	¶¼	3855
Williams et al, Hutcherson 1	¶¼	3591
ERATH COUNTY—		
TP Coal & Oil Co., Diaz 1	¶1½	2000
PALO PINTO COUNTY—		
Bennings et al, Hinkson 1	*	1400
STEPHENS COUNTY—		
Brown et al, Riddle 7	7	1882

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CROCKETT COUNTY—		
The California Co., Shannon 3	350	2582
ECTOR COUNTY—		
Humble-Penn-Atlantic, Kloh 10-D..	2400	3685
FISHER COUNTY—		
Cranfill-Reynolds Co., Barrell 2....	400	3109
Roeser-Pendleton, Inc., Steele 1...	230	3205
MITCHELL COUNTY—		
The California Co., Foster 9	75	2935
PECOS COUNTY—		
McCurdy-Brown et al, Tippett-Humble 1	350	485
WARD COUNTY—		
Gulf Prod. Co., O'Brien 9	250	2688
O'Brien 10	110	2775
O'Brien 11	180	2765
O'Brien 12	235	2776

CENTRAL EAST TEXAS

VAN ZANDT COUNTY—		
Pure Oil Co., C. H. Cannon 3....	5000	2939
R. H. Peters 2	100	2944
J. T. Jarman 5	4000	2960
R. L. Wells (51½-ac) 9	4500	2937
Shell Pet. Corp., I. P. Tunnell 6..	10,000	2956
The Texas Co., W. H. White (35-ac) 2	5000	2958

SOUTH TEXAS

BEXAR COUNTY—		
Swearingen Oil Co., Fee 6	10	690
DARST CREEK—		
Humble O&R Co., D. D. Baker 8..	700	2555
Dowdy 3-A	600	2560
Magnolia Pet. Co., L. V. Echols 4..	50	2276
NUECES COUNTY—		
Saxet Oil & Gas Co., Dunn 6	500	4304
R. A. Thompson, Lawrence-Harrel 2	¶10	1659
WEBB COUNTY—		
French Oil Co., Benavides 3-A ...	70	2335
Magnolia Pet. Co., Wright 1	70	2335
South Texas Prod. Co., Benavides 1	*	3002
Benavides 2	*	3004
WILLIAMSON COUNTY—		
W. D. Anderson, Simmons 1-A....2500		2226
M. V. Anderson 6	500	2247
E. L. Chapman, T. P. Simmons 6..4500		1541
J. L. Collins & Co., Lawrence 2...	100	1852
E. E. Ertel et al, J. C. Abbott 6 ..	400	....
G. Stratton, J. C. Abbott 2	900	....
ZAPATA COUNTY—		
Alamo Drlg. & Leasing Co., Trevino 4	75	1242
Trevino 5	70	1244
Allied Gas Co., Trevino 15-A.....	75	1234
Allied Gas, Allen & Morris, Guittierez 4	100	1268
Trevino 2-B	100	1270
Blankenship et al, Monteanyor 3 ..	100	1275
Edgington & Niles, Trevino 4-B ..	¶15	1214
Nordan-Morris et al, Bustamente 1..	60	1254
de la Santas 1	*	1431
O. W. Killam, Cuellar 24-C	200	1574
National Oil Co., Adams 1	75	1262
S. R. C. Corporation, Cuellar 10-B	8	1244
Cuellar 5-B	75	1262
Trevino 5-B	75	1262

NEW MEXICO

LEA COUNTY—		
Amerada Pet. Corp., H. D. McKinley 3	¶10-14,000	4170
State 1-A	¶18-19,000	4160
The California Co., State 1...¶12½-1200		4195
Geo. F. Getty Oil Co., McKinley 4	14,000	4219
Humble O&R Co., Bowers 2-A ...8400		4208
Landreth Prod. Corp. et al, State 1-A	*	4520
Midwest Ref. Co., Byers 33...¶20-21,000		4025
Ohio Oil Co.-Independent O&G Co. State 2	¶15-5880	4175
State 3	13,400	4175
The Texas Co., Selman 1	375	4183
State 1-C	6390	4206

Natural Gasoline Plants Increased in 1929

There were 1035 natural gasoline plants in the United States, with a total daily capacity of 10,516,000 gallons, on January 1, 1930, according to a survey conducted by the United States Bureau of Mines, Department of Commerce. The last similar survey, that of January 1, 1928, showed a total of 1155 plants of 8,048,000 gallons daily capacity. Thus in two years the number of plants has increased by 120, but the total capacity has increased 2,468,000 gallons, or 31 per cent. This is, roughly, equivalent to the gain in production over the same period.

Over half of the increase in total capacity was registered in California, where the development of flush oil production having a comparatively high gas-oil ratio in such fields as Santa Fe Springs led to construction of some new plants and material enlargement of others.

Of the total plants, 999 were operating on January 1, 1930, and 36 were shut down. This compares with 1060 operating and 95 shut down two years ago, which indicates a tendency to dismantle plants as soon as they become obsolete or unprofitable. The total daily capacity of the plants operating on January 1, 1930, amounted to 10,278,000 gallons, or 98 per cent of the total, leaving only 238,000 gallons, or two per cent, for the shut-down plants. This contrasts with the refining industry, which usually has five per cent of its total capacity idle; the difference is due to the relative ease with which a refiner can secure a crude supply as against the difficulty the natural gasoline manufacturer has in re-establishing his gas connections.

During 1929 the average total daily capacity of the operating plants was 9,899,000 gallons, while the average daily production amounted to 6,015,000 gallons. This indicates that the plants operated at 61 per cent of capacity.

Although over 60 plants were dismantled in Oklahoma during 1929, the state, with 268 plants, continued to rank first in total number. California was second in number of plants with 165, and was one of the few states that showed a gain since the 1928 census. California was the leading state in total daily capacity, with 3,658,000 gallons; Oklahoma was second, with 3,085,000 gallons. The disparity between the average size of plants in various sections of the country was more pronounced than at any time since these surveys were begun. For example, the average size of the plants in Pennsylvania on January 1, 1930, was less than 1000 gallons, but in California it was over 20,000 gallons.

The largest plant in the country is that of General Petroleum Corporation of California at Santa Fe Springs; the largest plant east of California is that of Sinclair Oil & Gas Company at Seminole.

New Methods of Potentials May Effect California Drilling

(Continued from page 75)

Playa del Rey is clearly the most troublesome field in California, efforts to bring the area in the van of the movement to hold the state total down to some point just above 600,000 barrels. Production here has jumped to about 20,000 barrels and little progress has been made along curtailment lines. The plan of attack has not been completed and it now seems that operators will be able to find an outlet for their oil against the wishes of curtailment leaders. Several of the smaller operators have been holdouts in other fields where curtailment has been practiced and they have apparently not changed their attitude. The fact that they may be able to work with independent refiners who will take the oil and convert it into gasoline is a disturbing possibility. The race to get production at Playa del Rey is an expensive and questionable problem, so it is evident that operators in the townlot district will not shut in their wells or reduce the flow if they can avoid it. Particularly is this true, in view of the fact that many of the late completions will not prove profitable. The entire curtailment program has been placed in jeopardy by this troublesome field and although the remainder of the state probably will not release its hold on conservation, a flood of oil from Playa del Rey would force the more settled fields to suffer. It might be possible to give Playa del Rey what would in reality be an unfair advantage and bring them under the agreement. This would be accomplished by allowing them the greater part of their potential in return for a partial curtailment. This plan would be unfair to other fields, however, even if it kept production well away from the peak. Control of drilling is out of the question and the way matters stand at this time, control of production is almost as questionable.

The effort to extend the curtailment program at Long Beach to cover an indefinite future period is gaining momentum and most of the operators favor the idea. Under the new plan a more flexible rule for producing and marketing the oil is outlined, but the field would not profit materially from an increased potential. The need for a stabilized market is obvious. New production and only small declines in other critical fields places the field in a weak technical position, so far as the crude market is concerned and with about 125 wells drilling a more permanent curtailment program is necessary.

Criticism of the high potentials established is being heard, independent engineers claiming that the totals set are too high for several fields. In the absence of correct figures, acceptance of either the high, low or intermediate estimates is questionable. When the potentials for individual fields are considered, they do look very high, when declines are considered. Since the allowables are based on the modified potentials, the latter are more important than might be expected. Belief that the potentials are merely theoretical figures which are of little moment is held by some, but in the final analysis, the allowables are determined from the potentials. If one field is given a potential too high, its allowable may be too high, at the expense of another field. The methods used to determine the potentials are somewhat flexible. Failure to decline a few of the critical fields is causing criticism from operators in the more settled fields. The fact that these fields are not given a decline does not entitle them to a higher allowable, provided other fields do not decline, but eventually there should be a general decline and these fields will profit by the state-wide drop if they are shown to be able to produce approximately the former percentage of the original total. Use of "effective potential" has helped to remedy this situation, however.

The wisdom of a policy to show a high state potential is being questioned, fear being expressed that a natural desire to boost the allowable will follow. Small increases in the allowables in a few fields may not be pleasing to those whose declines are obvious. The committees arrive at both the potentials and allowables in an impartial manner, but there is some evidence that the former is too high.

Santa Fe Springs has had few completions during the past month and the decline has been steady, despite a curtailed flow. All zones have shown a smaller gas pressure, while the Clarke sand has been a distinct disappointment. An allowable well up toward 200,000 barrels appears high, when the action of the field on the open-flow test of several months ago is considered. The field was almost 100,000 barrels under the potential rating and the decline since that test has been fairly steady. Estimates of outside engineers range from 140,000 barrels to 175,000 for the potential. Calculation on a decline curve basis has almost invariably shown the method to be conservative when open-flow tests have followed. This was particularly true at Santa Fe Springs several months ago.

Determination of the potential at Long Beach is a difficult matter, with completions being recorded at a rapid rate and the decline being a questionable factor. Addition of new oil is more nearly offset by the field decline than generally believed, however, and arriving at the potential is much more than the previous potential plus nearly all of the additional production. The decline of the older wells must be regarded as slow, and it is upon this basis that the committees determining the potential calculate their totals. The open-flow potential six months ago was about 166,000 barrels, or about 15,000 barrels below the average current estimates based on various decline curves and rules of thumb.

Recognition of the potential established at Elwood early in the year resulted in criticism from outside operators who were opposed to the producing tactics employed in the field. It was during this test that the wells were opened up without regard to safety and allowed to flow at the highest possible rate. Subsequently new wells have been allowed to flow through the casing and tubing to establish an artificial potential. Wells which would normally make 3000 barrels have been produced through the casing, with perhaps the tubing thrown in for good measure. This resulted in a veritable "rolling out" of the oil from the shallow sand. The wells range from 3300 to 3700 feet deep and little pressure is required to flow the oil through the casing. It is claimed by some engineers that the allowable is higher than the safe potential, where all back pressure is released. At any rate, Elwood has been able to increase its potential sharply and it must be regarded as a remarkable field, even when the open-flow tests are not considered. Since there seem to be no set rules governing the methods of production practices during field tests, Elwood probably is "within the law" in this respect.

The high potential carried at Ventura may be justified, since the decline here is known to be slow. The recent open-flow test was higher than expected and for this reason criticism of the high potential allowed is tempered.

Accuracy of the Kettleman Hills potential is not so important, due to the agreement now in effect. Determination of the total here could be little more than guesswork, because most of the wells considered were shut down on top of the sand without a production test.

WILDCATS FROM ALL SECTIONS

SOUTH TEXAS

ATASCOSA COUNTY — American Central O&G Co.'s McConnell 2 W. M. C. Baker sur, td 400 ft, still sd. Frontier Oil Co.'s Boynton 2, John Sharp sur, td 800 ft, dr.

BASTROP COUNTY—Pacific O&G Co.'s J. M. Lytton 1, ru.

BEXAR COUNTY—Bolling and Micheal's J. P. Adam 1, M. Gotzire sur, td abt 800 ft, dr. Eckert and Son's Sandemer 7, Menchaca sur, lcn. Edminston et al's Hamberdale 1, (Dobrowolski pool) td 688 ft, set csg, dr out plug. KMS Pet. Co.'s E. Salicky 1, Mission Garden sur, lcn. Moore and Juar's Ellison 1, 14 mi w of San Antonio, td 2110 ft, csg set top of sand to test, fsh at last report. W. M. Morgan et al's Bloodgood 1, Perido sur, td 700 ft, sd. Penn Oil Co.'s Cooksey 1, J. W. Ball sur, lcn. Penn-Tex Oil Co.'s Sandemer 3, Menchaca sur, td 600 ft, dr. Russell & Moore's Mills 1, Angel Navarro sur, td 750 ft, re-dr at 735 ft; Price-Storey 1, A. Navarro sur, td 200 ft, sd. Swearingen Oil Co.'s Fee 6, td 690 ft, prod 10 bbls; Fee 7, lcn; Halverdier 2, lcn. Henry Yelvington's (formerly Swift & Fischer) Beck 1, P. W. Hays sur, td 1400 ft, sd at present.

BLANCO COUNTY—Anderson & Manning's 1, John W. Speer sur, ru. Adams & Lysle's Leeders 1, James Standford sur, td 440 ft, set 8-inch csg at 400 ft. D. J. Meeks' E. W. Walker 1, td abt 430 ft, set 8¼-inch csg. C. L. McCreary's Miers 1, Scherling subdivision, td 100 ft, dr. Rosenfield et al's Hohenberger 1, (survey 94) sp in. H. Sitton's McMillen 1, 2 mi w of Blanco, mov on heavy rig.

BROOKS COUNTY — Houston Oil Co.'s Wormser-Holbein 2, td 3396 ft, on dst at 3149 ft, made small gasser, dr to 3235-40 ft, gas showing 3251-3254 ft, tested gas; 3356-3358 tested gas; 3396 ft dr in sandy shale. Humble's Singer 2, td 4620 ft, dr. Southern Crude Oil Purchasing Co.'s Holbein-Wormser 1, td 400 ft, set 12½-inch surace csg, waiting on cement.

CALDWELL COUNTY—W. E. Allan's McKean 2, phep to sp in. Al Buchanan's Brown 2, C. M. Cannon sur, td 40 ft, surface pipe set and sd. Herb Morgan's Perry 2, w of No. 1, lcn.

COMAL COUNTY—Caldwell and Lanier's Hyler 1, no information.

DUVAL COUNTY — Callahan, Howard & Smith's Luby 1, (Survey 24) td 3790 ft, dr. Humble's Koehler 48, ru. Mag. Pet. Co.'s Lundell 1, td 5838 ft, fsh; Hahl-Norton 1, Pointevent sur, td 1625 ft, dr. W. E. Mulholland's Benavides 2, td 2250 ft, dr. Putman & Walsh's Hagdist 1, (Survey 2694) td 2510 ft, aband. SAL O&G Co.'s Welder-Woods 2 (Survey 215) td 2130 ft, dr, last report. South Texas Prod. Co.'s Dinn 3, (Survey 398), td 500 ft, dr. Vacuum Oil Co.'s Duval Ranch 1 (Survey 280) dr water well, last report. Sloan et al's Luby 1, (Survey 593)), lcn.

EDWARDS COUNTY — James Dalgish et al's Sid Peterson 1, (Warner Ranch), td 1420 ft, dr. Phillips Pet. Co.'s Holman 2, td 4120 ft, csg set, wating on cement.

FRIO COUNTY—A. H. Wray's Barns 1, (Sec. 123) td 100 ft, sd.

GOLIAD COUNTY—A. G. Rheimenschneider, Trustee's, A. T. Fromme 1, Peter Dexter sur, td 1700 ft, dr. Union Prod. Co.'s Ray 12, W. E. Sutherland sur, td 5070 ft, dr; Ray 27, Jabian Gomez sur, lcn; Ray 28, lcn; Ray 29, 2 mi e Ray 3 of Union, lcn.

GONZALES COUNTY—Lake & Thompson's Campbell 1, (Saturn area) ru rotary. Linden Pet. Co.'s Hensley 1, James Smith sur, td abt 800 ft, dr. John Mauldin's (Finnell & Elam) Robinson 2, td 3284 ft, Halliburton test is being made of oil sand. Sterene & Terrell's F. Ramzinsky 1, no report. United North and South Dev. Co.'s Preston 2, td 2308 ft, sd.

GUADALUPE COUNTY—Abercrombie et al's Dix McKean 9, Joel R. Robinson sur, dk. Adams & Lyles' Nitsch 1, (Zoboroski area) td 2711 ft, show sulphur water in Edwards topped at 2656 ft, chalk topped at 2319 ft, sd. AMH Oil Co.'s F. S. Bibbs 1, J. W. Robinson sur, td 2571 ft, sd. Cranfill-Reynolds' J. McIntyre 1, A. Gibson sur, td abt 1305 ft, dr. Empire O&G Co.'s Dowdy 5, td 1900 ft, dr. Humble's D. D. Baker 8, td 2555 ft, prod 700 bbls 2523 ft, set cas, completed; Dowdy 3A, td 2560 ft, prod 600 bbls 2514 ft, set cas, completed. Hines, Brown and Davenport's Atzger 1, no report. Guy Lewis et al's Malone 1, dk. New Braunfels O&G Co.'s Seidemann 1, 1 mi se of New Braunfels, Comal County line, td 500 ft, dr. Mag. Pet. Co.'s L. V. Echols 4, (440 ft w of No. 3) td 2276 ft, prod 50 bbls 2231 ft, set cas on top crevice in Taylor marl. Ray Oil Co.'s R. Flesing 1, M. Baker sur, td 940 ft, dr. Suttle et al's Baenziger 2, A. Manzola sur, prep to sp in.

JIM HOGG COUNTY—Cole Pet. Co.'s 1, sur 23, lcn; Wood 1, sur 82, lcn. North & Walton's Allen 1, W. P. Allen ranch, lcn. William H. Barnhart's McCampbell ranch 1, Barnhart subdivision, bldg dk. E. E. Watts, Agt.'s Gomez 1, sur 125, td 100 ft, dr.

KARNES COUNTY—Morrissey & Edminston's T. H. Ragsdale 1, John McCall sur, td 1365 ft, sd.

KENDALL COUNTY—Borget et al's Wallie Haag 1, td 1050 ft, dr. R. M. Perkins' J. Lawhon 1, sec 10, td 580 ft, sd. Dixon et al's Behr 1, 3 mi se Sisterdale, td below 2100 ft, dr, complete fsh job at 2090 ft. Molwinkle et al's Karston 1, 1 mi w of Kendalia, td about 1250 ft, dr. Permian Oil Co.'s Boles 1, 5 mi ne Boerne, ru. P. B. Sterling's McCrocklin 1, C. B. Owen sur, td 850 ft, sd on top of pay lime. Hardy Sitton's W. B. Garvin 1, td 760 ft, sd for 6⅝-in cas.

KERR COUNTY—Mashe & Trunstill's Jeff Love 1, Western Kerr County, td 700 ft, set cas.

KINNEY COUNTY—Blume et al's Herbst 2, Boindezter Burns sur, td 300 ft, sd. Mag. Pet.'s Wardlow 1, Blaez sur, td 2986 ft, dr. Mardon Oil Co.'s Clamp 2, td 2714 ft, dr.

LIVE OAK COUNTY—Cattlett & O'Neill's Pat Pugh 1, E. Garner sur, lcn. Houston Oil Co.'s Booth 1, td 5257 ft, dr stem stuck, dk pulled in and wrecked, rebuild dk; Carwight 22, td 4800 ft, dr in shale. Larco Gas & Pet. Co.'s Wallace D. Wade 1, lcn. Maskey et al's Reeves-Brown 1, J. E. King sur, ru.

MAVERICK COUNTY—Ryeade Oil Co.'s Chittim 5, sec. 129, td 4675 ft, dr; Sullivan 5, sec. 82, td 6874 ft, dr; Chittim 6, sec. 416, td 3475 ft, sd.

McMULLEN COUNTY—N. Coquat's Wm. Fahler 1, Geo. Pickett sur, td 2004 ft, temp abn, contract depth. Mogul Pet. Co.'s Martin 1, 15 mi sw of Tilden, lcn.

MEDINA COUNTY — Armstrong et al's Donaldson 1, td 170 ft, rd. Calco Pet. Co.'s Crawford 1, sur 478, td 2000 ft, fsh for ds, top of Austin at 1978 ft, about 250 ft high. Fitzgerald et al's No. 1, 6 mi se of Devine, ru. Lynko Pet. Co.'s Irrigated Farms 2, E. Reisacher sur, lcn. National Oil Co.'s Howard 1, John George sur, td 1645 ft, set 6⅝-in cas at 1610 ft on top of sand, cored saturated sand 35 ft, to dr in shortly. Pan-American Dev. Co.'s Hardt 1, td 1800 ft, set cas at 1170 ft, dr.

NUECES COUNTY — Grimm & Yakey's Land Ranch 1, 7½ mi ne of Agua Dulce field, lcn. Goucher Dr. Co. 1, 1½ mi n of Robstown, lcn. Houston Oil Co.'s M. E. Brooks 1, Agua Dulce field, td abt 5300 ft, sd; Rand Morgan 1, lcn. Independent O&G Co.'s C. Baldwin 1, td 2300 ft, dr. Saxet O&G Co.'s Pearson et al 2, Donigan 6 mi w of Corpus Christi, lcn; Dunn 6, td 4304 ft, prod 500 bbls oil, some water, set csg in sand topped at 4290 ft, opens new field 5 miles w of Corpus Christi. R. A. Thomson's Trustee, Lawrence-Harral 2, 8 mi w of Corpus Christi, td 1659 ft, producing 10,000,000 cubic ft of dry gas with 500 lbs pressure.

SAN PATRICIO COUNTY—Cosden Oil Co. et al's John Schmalsteig 1, C. H. Paul sur, td 1200 ft, set 10-in csg, in csg set 400 ft, re-dr. Jacob, Bussini & Pickett's J. C. & Bobby Baldwin 1, td below 4000 ft, sd mv on heavy rig, to re-dr. J. L. Kennedy's Lolie McRay 1, ru. Peterman Oil Co.'s O. K. Crow 1, J. H. Paul subdivision, prep to sp in; Foster 1, 3½ mi w of Sinton, lcn. Saxet Oil Co.'s Carroll 1, Taft subdivision, prep to sp in. Union Prod Co.'s Welder 4, E. Portillo sur, prep to sp in.

STARR COUNTY—Kusk Exploration Co.'s Kelsey 1, J. B. Villereal sur, td 500 ft, dr. Nuguna Oil Co.'s Kelsey-Boss 1, Porcion 75, ru. Mrs. J. L. Smith's Walch 1, td 915 ft, shows gas and sulphur water, installed roller bit, std tempararily.

UVALDE COUNTY — Mission Dr Co.'s Uvalde Pecan Co. 1, td below 1300 ft, sd. Phantom Oil Co.'s Caludt 1, sur 661, td 2482 ft, dr.

VAL VERDE COUNTY—O O Owens et al's Mills 1, td 6610 ft, dr. Phantom Oil Co.'s Ingram 1, sur 44, td 3050 ft, fsh.

VICTORIA COUNTY—ATTE Dr Co.'s J. C. West 1, td 1525 ft, still sd. Houston Oil Co.'s McFadden 1, C. L. Mann sur, ru. Lion Oil Co. and Ref Co.'s McFadden 2, Bloomington district, td 4032 ft, re dr, 8¼-in csg set at 4012 ft, gas sand at 3740-3975 ft. The Texas Co.'s McFadden 1, td 2300 ft, dr.

WEBB COUNTY—E. H. Buckner's Benavides 1-A, Sec 14, Blk 5 Arispe Grant, dk. J. L. Elliott's Esperanza Land and Livestock Co. Sec 815, td 1980 ft, standing. French Oil Co.'s Benavides 3-A, td 2342 ft, csg set at 2335 ft, pumping 70 bbls oil. Gattlin & Matthews' Garza 1, sur 413, ru. O. W. Killam's Bruni 19, lcn; Bruni 12, Blk 22, Albercas Grant, td 3100 ft, dr; Bruni 1, Sec 1 of Billings ranch, td 1800 ft, dr; Bruni 5, td 3009 ft, showed 15,000,000 cubic ft of gas and 50 bbls of oil and salt water at 3000-09 ft, plugging back to complete as gasser, Whipstocked out at 2555, bottom hole 2600. Completing as big gasser. New sound in Cole field. Mag. Pet Co.'s Wright 1, sur 674, dk; Benavides 4-a, td 2340 ft, set csg at 2335 ft, pumping 70 bbls; Jones 1, sur 674, td, 2365 ft, dr. Geo. S. Marshall's Garcia 2, td 600 fd,tr. South Texas Prod Co.'s S. Benavides 1, td 3002 ft, abnd; S. Benavides 2, Arispe Grant, td 3005 ft, abnd; Benavides 3, td 800 ft, dr, 10-in set 40 ft. Trussell, Cexeaux & Partee's Bruni 1, td 600 ft, dr. Washington-Texas O&G Co.'s R. O. Benavides 1, Blk. 16, Sec 268, ru; Barnsley 1, td 1600 ft, dr.

WILLIAMSON COUNTY — Alford et al's Kuykerkendall 1, td 1920 ft. W. D. Anderson's Simmons 1-A, td 2226 ft, prod 2500 bbls; M. V. Anderson 6, td 2247 ft, prod 500 bbls; M. V. Lawrence 7, td, not reported, set casing; M. V. Lawrence 8, lcn; T. P. Simmons 5-A, td 1465, set casing; T. P. Simmons 6-A, lcn; S. J. Smith 1, td 2575 ft, dr. Big Indian Royalty Pool Co.'s Robenberg 1, td 1150, dr. E. L. Chapman's J. C. Abbott 6-B, on production; F. Fuchs 1, td 850 ft, fishing; T. P. Simmons 6, td, 1878 ft, prod 4500 bbls, serpentine topped 1541 ft. J. L. Collins & Co.'s M. V. Lawrence

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr — straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; Wosr—waiting on standard rig.

2, S. Miller sur, td 1852 ft, prod 100 bbls; M. V. Lawrence 5, td 1462 ft in Serpentine; M. V. Lawrence 7, S. Miller sur, lcn. E. E. Ertel et al's J. C. Abbott 6, td not reported, producing 100 bbls; H. Swenson 1, td not reported, dr. Elliott & Moore's A. J. Carlson 1, td 40 ft, sd in shale. Elliott et al's S. W. Jones 1, td 2943, sd; topped chalk 2012 ft; bottom of chalk 2400 ft; top of Buda 2562 ft; bottom Buda 2623 ft; top Georgetown 2670 ft; top Edwards 2840. A. J. Luke's A. Simmons 1, H. Owen sur, td 2210 ft, in Serpentine. W. C. Marshall's R. A. Krueger 2, td 2800 ft. E. R. Mart's T. P. Simmons 4, S. Miller sur, lcn. Martin et al's S. H. Jarrell 1, td 40 ft, sd. Rosenfield's Pfluger 1, td 1234 ft, fishing. M. M. Rowan's A. Jackson 1, td 1900 ft, dry. Southland Dev. Co.s' Lawler 1, td not reported, sd. G. Stratton's J. C. Abbott 2, S. Miller sur, td not reported, prod 900 bbls; J. C. Abbott 3, S. Miller sur, td 1575 ft, prod 800 bbls; J. C. Abbott 4, S. Miller sur, td not reported, fishing; J. C. Abbott 5, S. Miller sur, td not reported, drilling. A. M. Keisker's E. L. Chapman 1, DK, sx complete. Jess Tomberlin's Partain Bros 1, td 1410 ft, dr. Luke et al's A. B. Simmons 1, td 2210 ft, in Serpentine. R. S. Wilson et al's C. Sitman 1, td 2850 ft in sandy shale.

ZAPATA COUNTY—Alamo Dr. and Leasing Co.'s Trevino 4, Blair lease, td 1251 ft, cased 1242 ft, prod 75 bbls; Trevino 5, Blair lease, td 1267 ft, set 1244 ft cas, prod 70 bbls; Trevino 6, Claggett lease, lcn; Trevino 6, Blair lease, lcn. Allied Gas Co.'s Trevino 9-A, td 1238 ft, set cas, waiting on cement; Trevino 15-A, td 1252 ft, cas set at 1234 ft, prod 75 bbls; Trevino 16-A, lcn. Allied Gas & Allen & Morris' Guittierrez 4, td 1276 ft, set 1258 ft cas, prod 100 bbls; Trevino 2-B, td 1268 ft, set cas, 1248 ft, prod 100 bbls; Trevino 2-B, lcn; Trevino 4-B, lcn; Trevino 5-B, lcn; Trevino 6-B, lcn; Trevino 7-B, td 1000 ft, dr; Trevino 8-B, lcn; E. Guittierrez 5, lcn; E. Guittierrez 6, lcn; E. Guittierrez 7, lcn; E. Guittierrez 8, lcn; E. Guittierrez 9, lcn. Arnold & Ahler's (Wicker et al) Garza 3, dk. Blankenship et al's Montemayor 3, td 1293 ft, cas set 1275 ft, prod 100 bbls. Blair & Son's Guittierrez 1, sw of Mucgleroy field, sp in. Edgington & Niles' Trevino 2-A, td110ft, dr; Trevino 4-B, td 1227 ft, cas set, prod 15,000,000 cubic ft gas at 1214 ft; Trevino 4-A, td 1229 ft, cas set 1214 ft, spraying oil and 25,000,000 cubic ft gas; Trevino 5-B, lcn. Nordan-Morris et al's C. Bustamente 1, Comita grant, td 1254 ft, set cas at 1233 ft, prod 60 bbls; C. Bustamente 2, lcn; Trevino 1, sec. 412, td 1270 ft, sand 1254-1270 ft, coring deeper; E. Bustamente 1, Comita grant, lcn; S. Bustamente 1, Comitas grant, lcn; de la Santas 1, Comita grant, set cas at 1229 ft, 1236 small well, drilled to 1431 ft, blew in big gasser with tester in hole, Plugged and abn. Henne & Winch's Bustamente 2, lcn. Keene & Jackson's Garza 1, prep to sp in. O. W. Killam's Cuellar 25-B, td 1566 ft, set cas; Cuellar 24-C, td 1574 ft, cas set at 1566 ft, prod 200 bbls at 1771 ft; Lopez 3, sur 75, td 1400 ft, sd. Lincoln O&G Co.'s Wormser 1, Huerta grant, ru. National Oil Co.'s Adams 1, share of Borego grant, td 1185 ft, set cas at 1172 ft, dry and abn; 1-A (150 ft n of No. 1) skidding over dk to start dr shortly. B. F. Nixon's Guittierrez 1, td 100 ft, dr. John Papas, Inc.'s Flores 1, Porcian 350, dk. Penn Tex Oil Co.'s F. Benavides 3, ru, laying water line. Penny Prod. Co.'s Trevino 1, td 780 ft, setting rotary tools; Cuellar 1, td 350 ft, dr. W. R. Shankle's Trevino 3, sec. 65, lcn; Trevino 5, sp in. Skoglund & Maddox's Montemayor 1, dk. SRC Corporation's Cuellar 9-B, td 1273 ft, dr; Cuellar 10-B, td 1244 ft, csg set 1229 ft, prod 80 bbls; Cuellar 11-B, td 800 ft, dr; Cuellar 5-B, td 1262 ft, cased 1248 ft, prod 75 bbls; Trevino 5-B, td 1262 ft, csg set 1248 ft, prod 75 bbls; Trevino 5-A, td 1269 ft, set csg at 1266 ft, waiting on cement. T. W. Word's Uribe 1, (share 7 Borrego grant) ru.

ZAVALLA COUNTY—Anglin O.&G. Co.'s Pryor 5, td 1103 ft, no report on operations. Cromwell et al's Whitecotton 1, dk. Cribbs and Davidson's Weatherby 1, (near Loma Vista), td 1782 ft, re-dr. Texas Gas & Fuel Co.'s Pryor 1, td 850 ft, dr. Weigand Bros.' Gates 1, td 2350 ft, new dr stem bits and crude oil, re-dr.

WEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
LOVING COUNTY—		
Dixie Oil Co.-Phillips Pet. Co., Johnson 1	*	4590
MENARD COUNTY—		
Jas. Duffy & Panhandle Ref. Co., Eckhardt 2	*	3200

ANDREWS COUNTY—Deep Rock Oil Co. et al's A. R. King 1, flows 25 bbls daily, td 4454 ft; W. J. Mathis 1, elev 3193 ft, top salt 1730 ft, set tubing with packer after two shots, td 5088 ft. Fuhrman Pet. Corp.'s W. T. Ford 1, elev 3186 ft, gauged 25 mil ft sulphur gas at 4062-68 ft, dr 4070 ft. Humble-Penn-Atlantic's H. M. Wilson 1, elev 3347 ft, top salt 1685 ft, top brown lime 4177 ft, dr 4725 ft. Martin-Maer-Kell's Meadows 1, top salt 1705 ft, dr 2540 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, dr 2510 ft.

COKE COUNTY—Arkansan Fuel Oil Co.-Dixie Oil Co.'s Stepp 1, sd hfw 4020 ft.

CONCHO COUNTY—W. C. Beesley et al's Sam Waring 1, sp and sd. A. W. Turner et al's Brosig 1, sd hfw 1550 ft.

CRANE COUNTY—Cranfill Bros. Oil Co.'s J. T. Muir 1, lcn. Cranfill Bros. & Gulf Prod. Co.'s Tubbs 1, elev 2526 ft, top salt 505 ft, top white lime 2445 ft, fsh tools 3093 ft. C. C. Duffey et al's Cowden 1-C, top salt 560 ft, dr 1785 ft. Sun O'l Co.'s State Bank 1, top brown lime 2856 ft, dr in sulphur water 3294-3310 ft.

CROCKETT COUNTY — California Co.'s Shannon 3, top salt 1105 ft, top lime 2410 ft, flowing 33 bbls 16 hrs 2536-82 ft. Magnolia Pet. Co.'s Hoover 1, elev 2412 ft, top salt 660 ft, top lime 1890 ft, dr 6050 ft; Hoover 2, dr 600 ft. McMan-Amerada Pet. Corp.'s Powell 2, rig.

CULBERSON COUNTY — Grisham-Hunter Corp.'s W. D. Garren 2, elev 4325 ft, top Delaware lime 1273 ft, trace oil 1400-15 ft, sd 1520 ft. W. L. Kornrumpf et al's Garren 1, sd 850 ft.

ECTOR COUNTY—Penn Oil Co.'s Kloh 1, elev 3010 ft, top salt 1655 ft, abn 2540 ft. Southern Crude Oil Pur. Co.'s Cowden 1, elev 3053 ft, show gas 3040-45 ft, set cas 3950 ft. Sunray Oil Co.-Llano Oil Co.'s Jones 1, flowing small heads oil after two shots, td 3823 ft. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, top salt 865 ft, sd 2375 ft.

EDWARDS COUNTY — Phillip Pet. Co.'s Holman 2, dr 4510 ft.

FISHER COUNTY—Cranfill-Reynolds Co.'s Flannigan 2, elev 1794 ft, testing with 2500 ft oil in hole 3090-95 ft; B. F. Willingham 3, lcn. Midwest Explo. Co.'s Decker 1, elev 1907 ft, testing with 1200 ft oil in hole 3236-50 ft. The Texas Co.'s Teagarden 1-A, co after shot 3250 ft.

GARZA COUNTY—H. C. Cate & Mel Richards' Stoker 1, elev 2591 ft, top salt 935 ft, top lime 2365 ft, cem cas 3017 ft to test show gas 3045-55 ft.

GLASSCOCK COUNTY — Ed. Timberlake et al's Meek 1, elev 2575 ,ft, top lime 2670 ft, fsh 2965 ft. World Oil Co.'s McDowell 3-C, elev 2537 ft, sd 680 ft.

TOM GREEN COUNTY—Belding & Dutton's Norsworthy 1, co 440 ft. Mintex Oil Co.'s Campbell 1, dr 780 ft. Phillips Pet. Co.'s Jennings-Gulden 1, fsh 3275 ft.

HOWARD COUNTY — Greene Production Co. & Getty Pet. Corp.'s Denman 1, rig. Meriwether Oil Co.'s Smith 1, elev 2590 ft, top lime 3010 ft, trace oil 3060-76 and 3082-3109 ft, salt water 3213-25 and sulphur water 3225-45 ft, dr 3270 ft.

IRION COUNTY—Burton et al's Nutt 1, lcn. J. E. Bristow et al's Nutt 1, dr 350 ft. Carl Cromwell et al's Tankersley 1, ur 1305 ft. Straughn & Texannati Oil Co.'s Nutt 3, testing oil sand 1440-45 ft; Nutt 4, lcn; Tankersley 1, lcn. F. E. Webb et al's W. H. Williams 1, sp and sd. P. H. Williams et al's Ashe 1, sd 8900 ft; Noelke 1, sd 810 ft.

JONES COUNTY — Gibson-Johnson et al's Hudspeth 1, dr 2655 ft. C. R. Pope et al's Swann 1, sp and sd.

LOVING COUNTY—California Co.'s Reagan 2, top salt 735 ft, dr 3470 ft; Reagan 3, top salt 726 ft, dr 2965 ft; Reagan 4, dr 1910 ft. Dixie & Phillips' Johnson 1, elev 2819 ft, top salt 992 to 4130 ft, top Delaware sand 4326 ft, sulphur water 4570-90 ft, pb to shoot. A. R. Eppenauer et al's Allen 1, sp and sd. Geo. A. Henshaw et al's Reagan-McElvain 1, top salt 745 ft, dr 1000 ft; Russell 2, salt 755-4038 ft, top black lime 4227 ft (dd after shot) dr 4360 ft. L. E. Lockhart et al's Wheat-Ramsey 1, dr 3940 ft. Miller-Burge & Healy's Chapman 1, top salt 750 ft, dr 2460 ft. Joe Rush et al's Jim Wheat 1, top salt 785 ft, sd 2475 ft. Lee O. White et al's Russell 1, top salt 750 ft, dr 1700 ft.

MENARD COUNTY—W. C. Barnett et al's Callan 3, elev 2077 ft, sd hfw 1270 ft. L. G.

— — — — — — — — — CUT OUT AND MAIL — — — — — — — — —

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Priest et al's J. P. Sorrels 1, elev 2279 ft, dr by tools 2415 ft.

PECOS COUNTY—Barnes et al's Sanford 1, set cas 777 ft. E. L. Chapman et al's Streety 1, elev 2653 ft, sd 2200 ft. Curry & Eakin's Pecos Valley 1, sd 790 ft. C. L. Dittman et al's H. J. Eaton 1, machine; Eaton 2, lcn; Eeaton (Sec. 37) 1, lcn; J. S. Jackson 1, lcn. Humble O&R Co.'s Kokernot 1, elev 3595 ft, top salt 2715 ft, dr 2735 ft; Mrs. C. L. Thompson 1-B, dr 140 ft. Independent O&G Co.'s McDonald 4, sr 1720 ft after shot. Magnolia Pet. Co.'s L. L. Byrne 1, dr 445 ft. Messenger et al's Butz 1, sd 740 ft; Byrne 2, sd 1367 ft. J. R. Miller et al's Bennett 1, sd hfw 1700 ft. J. D. O'Mara et al's Bennett 1, sd 1230 ft. Oregon Oil Corp et al's Yates 2, elev 2565 ft, top salt 710 ft, sd hfw 2440 ft. O. J. Perren et al's Eaton 2, dr 1370 ft; Jackson-Pure 1, fsh 1537 ft. Pure Oil Co.'s Harrison 1, re-cem cas, td 1270 ft. Rio Grande Oil Co.'s Webb 1, rig. Sides & Cloyd's Blackstone-Slaughter 1, dr 2140 ft. N. E. Tanner et al's (was M. M. Rowan) University 1, dd, co to set 5 3/16 cas 2058 ft.

PRESIDIO COUNTY—Brite Prod. Co.'s L. C. Brite 4, elev 4536 ft, sd 2630 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 3-C, flowed 79 bbls oil 9 hrs, co lime formation at 8923 ft; University 4-C flowed 75 bbls oil and erecting rotary rig, td 8220 ft; University 5-C, dr 2830 ft; University 179, fsh junk 4003 ft. Group One Oil Corp (Conoco's) University 4-B, dk.

REEVES COUNTY — The California Co.'s Kloh 1, elev 2798 ft, fsh 3616 ft. May & Milton's J. B. Ellis 1, sd 1030 ft. Salsbury & Gregory's Bell 1, sd 260 ft. Lee O. White et al's Mrs. Lizzie Hersheusen 1, elev 3244 ft, top salt 2670 ft, dr 4250 ft.

RUNNELS COUNTY — Boyce & Lamar's Lange 1, elev 1844 ft, sd 2643 ft. Chas. Dutton et al's G. W. Dean 1, sd 1330 ft.

SCHLEICHER COUNTY—Delmar Oil Co.'s O'Harrow 1, dr 4165 ft. Phillips Pet. Co. et al's J. A. Whitten 1, elev 2333 ft, pb from salt water 6880 ft and shot five times but dry. Munger-Wilson Oil Co.'s Page 1, elev 2270 ft, fsh 4912 ft. Paul Teas & Walter Gant's Allison 1, dr 3230 ft. J. D. Wesner et al's R. E. Ratliff 1, sd 750 ft.

SCURRY COUNTY—J. G. Armand & Camp Springs O&R Co.'s Strayhorn 1, sd 700 ft; Quinn 1-A, elev 2316 ft, sd 4374 ft. D. H. Byrd & H. A. Harmon's Murphy 1, elev 2298 ft, top salt 775 ft, top lime 1507 ft, swabbed 135 bbls oil from broken lime pay, td 3437 ft. R. B. Pender O&G Co.'s Davis 1, elev 2308 ft, top salt 445 ft, co 4925 ft. Transcontinental-Vacuum Oil Co.'s Peckham 1, elev 2155 ft, sd 3396 ft.

TAYLOR COUNTY—W. G. Clark & Humble O&R Co.'s Kendall 1, sd 2080 ft. Eastland Oil Co. et al's Hunter 1, dr 1900 ft. Gibson-Johnson et al's Bingham 1, sedg cas 2432 ft. H. B. Herring-Hucony Gas Co. et al's Richie 1, sd 1080 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, dr dry sand 6073-79 ft. Sanger et al's Abilene Fee 1, rig.

TERRELL COUNTY—Big Bend Oil Corp. et al's Bassett 1, sd 2130 ft. Transcontinental Oil Co.'s Good 1, elev 2405 ft, fsh 5226 ft.

VAL VERDE COUNTY—O. O. Owens et al's H. Y. J. Mills 1, elev 2130 ft, dr 6725 ft. Phantom Oil Co.'s Ingram 1, dr by tools 3035 ft.

WARD COUNTY—Atlantic Oil Prod. Co.'s Miller-Reynolds 1, dr 610 ft. Atlantic & California Co.'s E. W. Thomas 1, dr 1560 ft. Atlantic & Penn Oil Co.'s Bennett 1-B, dr 2270 ft. Bradford et al's M. B. Murry 1, sd 1140 ft. Gulf Prod. Co.'s Hutchings 4, flowed 22 bbls oil 14 hrs. at 2565-70 ft, dr 2590 ft; Hutchings 5, dr 1990 ft; O'Brien 13 and 14, rigs. Magnolia Pet. Co.'s Sealy 1, fsh 517 ft. R. F. Owen et al's Johnson 1, dr 1210 ft. Sid Richardson et al's O'Brien 4-A, dr 675 ft. Shipley Oil Corp.'s Monroe 1-A, dr 1915 ft. Texas Pacific Coal & Oil Co.'s M. Barker 1, lcn.

WINKLER COUNTY — Atlantic Oil Prod. Co.-Joe Maxwell's L. Daugherty 1, elev 2891 ft, top salt 1450 ft, top lime 2631 ft, trace oil and gas 2690 ft; dr 2780 ft. Atlantic-Simms Oil Co.'s Geo. Sealy 1, top salt 1690 ft, dr anhydrite 2757 ft. Champion-Winkler Oil Corp.'s Campbell 1, dr lime 4320 ft. Jeffrey et al's Brown 2, sd 3120 ft. Magnolia Pet. Co.'s W. F. Scarborough 3, rig.

CENTRAL EAST TEXAS

BOWIE COUNTY—Lee Timberlake et al's J. Tidwell 1, Jas. Eskell sur, elev 286 ft, top Pecan chalk 1229 ft, dr 2450 ft.

CAMP COUNTY—McDonald Bros.-Atlantic Oil Prod Co. et al's B. D. Tillery 1, J. H. Murphy sur, rig.

CASS COUNTY—Phillips Pet. Co.'s J. R. Olds 1, materials.

DELTA COUNTY—C. A. Everts et al's J. A. Smith 1, J. W. Renfro sur, elev 525 ft, Pecan chalk 355 to 399 ft, dr 1035 ft. Delta County Dev. Co.'s M. E. Hays 1, J. B. Anderson sur, elev 503 ft, Pecan chalk 421 to 481 ft, sd 3000 ft. Hazel-Curtis Oil Co.'s T. J. Irwin 1, B. Williahs sur, dr 3010 ft.

ELLIS COUNTY—C. G. Foster & S. C. Richardson's Moise-Cerf 1, LaPena sur, elev 440 ft, sd 2187 ft. E. M. Rogers et al's J. L. Winn 1, Orland Wheeler sur, sd 160 ft. The Triangle Corp.'s W. B. Hale 1, B. Smith sur, Austin chalk 78 to 437 ft, Woodbine sand 836 to 1120 ft, coring 2617 ft.

FANNIN COUNTY—North American Pet. Co.'s Allen 1, W. A. Broadfoot sur, sd 975 ft. Ed. V. Parsons et al's Morgan 1, J. E. English sur, elev 668 ft, reaming 3105 ft. E. M. Rogers et al's Mrs. E. C. McSwain 1, J. Tolgade sur, fsh 1350 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, sp and sd.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, Arron York sur, elev 397 ft, sd 2510 ft. L. G. Bradstreet & Co.'s J. J. Shaughnessy 1, John Isard sur, elev 548 ft, top Midway 1040 ft, sd 1968 ft. E. L. Chapman et al's Cade 1, Simon Weiss sur, elev 340 ft, dr 3200 ft. Cranfill-Germany, Inc.'s C. C. Starr 1, G. Acosta sur, elev 434 ft, Pecan chalk 2544-2770 ft, Austin chalk 3755-3937 ft, coring 4083 ft. Geo. L. Pace et al's S. Anthony 1, J. M. Betram sur, elev 410 ft, dr 2060 ft. Sunray Oil Co.'s R. H. Davis 1, E. G. Harris sur, Pecan chalk 2536 to 2694 ft, dr 3300 ft.

HUNT COUNTY—Fred B. Branson-C. A. Kelsey et al's J. S. West 1, Jas. Rhodes sur, elev 505 ft, Pecan chalk 1310-1365 ft, Austin chalk 1415-1815 ft, set 8½-in cas 2776 ft.

KAUFMAN COUNTY—Otto R. Winter & Coastline Explorations, Inc.'s John Barrow 1, R. A. Terrell sur, top chalk 1080 ft, dr 1625 ft.

LIMESTONE COUNTY—Haley-Meemann's Wilkes 1, J. Breeding sur, elev 421 ft, sd 1411 ft.

MORRIS COUNTY — Tucker-Fullwood-Cook's P. M. Staggers 1, G. Forbes sur, dr 1775 ft.

NAVARRO COUNTY—O. W. Killam-Phillips et al's L. N. Wilson 1, elev 391 ft, Austin chalk 1157-1497 ft, top Woodbine sand 1991 ft, dr 2660 ft. Navarro Oil Co.'s W. N. Mathews 2, A. J. & P. M. Smith sur, Austin chalk 755-1075 ft, bad hole 1550 ft. Young et al's J. H. Farmer 1, Robt. Finley sur, top Austin chalk 787 ft, sd 960 ft.

RAINS COUNTY—Everett & Morrison's F. Franklin 1, J. Christian sur, sp and sd.

RED RIVER COUNTY—E. L. Chapman et al's Morris-Guest 1, S. Lakin sur, sd 1505 ft.

RUSK COUNTY—Benedum-Trees Oil Co. & Clem S. Clark's M. L. McClaskin 1, Blackburn sur, rig. C. M. Joiner et al's Mrs. Daisy Bradford 3, Juan Ximinez sur, elev 390 ft, Pecan chalk 2590-2744 ft, base Austin chalk 3480 ft, lowering cas to test show oil 3536-92 ft. Moss et al's Mathews 1, top Pecan chalk 2296 ft, sd 2330 ft.

SMITH COUNTY—Owen-Sloan Oil Co. & R. H. Davis' J. H. Starnes 1, J. W. Allen sur, elev 417 ft, fsh 1942 ft. T. B. Slick & Winona Oil Co.'s Morgan Freeman 1, A. J. Lagrone sur, elev 503 ft, sd 1667 ft. Sun Oil Co.'s D. McGehee 1, Thomas Quevedo sur, lcn.

TITUS COUNTY—Deep Rock Oil Co. et al's F. M. Autrey 1, John Ping sur, elev 550 ft, dr 2275 ft.

VAN ZANDT COUNTY—Bethel Oil Co.'s P. Smith 1, M. Neal sur, elev 435 ft, chalk 2555-2790 ft, Austin chalk 3865 to 4009 ft, dr 4105 ft. E. L. Chapman et al's Chas. T. Wolverton 1, Wm. James sur, elev 555 ft, top Austin chalk 2835 ft, coring broken chalk 3220 ft; Wolverton 2, sd 510 ft. Dr. G. R. Cooper-E. Howard & C. W. Dooley's Elliott 1, W. H. Bundy sur, rig. Chas. F. Kolp et al's C. H. Mathews 1, W. H. Bruce sur, top Midway 680 ft, Pecan chalk 2085 to 2190 ft, dr shale 2220 ft. L. G. Priest et al's Blanche Blewett 1, E. Porter sur, elev 610 ft, Pecan chalk 2795 to 2957 ft, fsh 2990 ft. Texas Chief Oil & Roy. Co.'s J. P. Foster 1, F. Montgomery sur, elev 548 ft, dr 1520 ft. Vanco Oil Co.'s Wages 1, dk. Van Zandt Oil & Dev. Co.'s Sharp-Robinson 1, J. B. Ybarbo sur, elev 373 ft, top Pecan chalk 2764 ft, Austin chalk 4116 to 4508 ft, dr 4665 ft.

VAN FIELD—Geo. Anderson et al's Sanger (8-ac strip) 1, elev 550 ft, top Pecan chalk 1565 ft, dr 1818 ft. Broderick & Calvert's M. F. Shirley (2.07-ac strip) 1, dk. E. L. Chapman et al's Clark 1, dk blown down. Hartt Pet. Co.'s O. L. & L. L. Swain (2.3-ac strip) dk blown down. Hill & Hills Maxfield (¼-ac strip) 1, rig. Humble O&R Co.'s R. S. Blake 1, Austin chalk 2264-2327 ft, top Woodbine sand 2371 ft, dr cemt plug 2375 ft with show oil; Blake 2, Pecan chalk 1598 to 1675 ft, dr shale 1750 ft; Blake 3, sp and sd. Imperator Oil Corp. et al's Carter (strip) 1, dk; G. J. Luther (3.01-ac strip) 1, elev 447 ft, top Pecan chalk 1653 ft, top Austin chalk 2630 ft, sd 2665 ft. Roy Jenkins et al's M. E. Davis 1, sp and sd. Kraft & Kelsey's Wylie Enas 1, J. Prado sur, rig. Pure Oil Co.'s Ella York 1, dr shale 2435 ft; M. L. McMahon 1, top Pecan chalk 1675 ft, dr broken chalk 2625 ft.

WOOD COUNTY—Wood County Dev. Co.'s Ricks 1, Daniel Fuller sur, sp and sd.

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
AUSTIN COUNTY—		
J. T. O'Hara et al, Batla 1, Wm. Smithers sur	*	4000
CHAMBERS COUNTY—		
Superior Oil Co., H. Jackson 1, 4 mi High Island	*	4375

AUSTIN COUNTY—J. T. O'Hara's Batla 1, 2 mi nw Raccoon City, abn 4000 ft.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash dome, dr 4850 ft hard lime. Rycade & Amerada's Rapid City 1, 2 mi s Danbury abandoned 6275 ft. Rycade's Wisdom 27, Nash, dr 4250 ft lime. Rycade & Vacuum's Wisdom 1, Lake Jackson, lcn. Rycade & Amerada's Seaburn 1, Stratten Ridge, dr 1675 ft sand. Freeport Sulphur Co.'s Fee 2001 Bryan Mound, dr 2425 ft. Rucks & Patterson's Hunter 1, sw Hoskins Mound, sd 1175 ft. The Texas Co.'s O. F. Ewing 1, Manvel, dr 6550 ft shale. Mills Bennett's Reese 1, Allen dome, dr 3015 ft sand and lime; Poole 1, Allen dome, dr 1700 ft lime; Allen 2, Allen dome, ru. United Oil Synd.'s Mores 1, 3 mi n Danbury, dr 1440 ft shale.

CALHOUN COUNTY — The Texas Co.'s Thomas 1, Chocolate Creek, dr 4550 ft.

CHAMBERS COUNTY—Pure's Mayes A-11, Lost Lake, dk; Lost Lake 5, dr 3925 ft shale and lime. Pure-Rycade's Jackson 1, Oyster Bayou, sd 4125 ft. Shell's Herff 1, Moss Bluff, abn at 5626 ft. Superior Oil Co.'s H. Jackson 1, 4 mi w High Island, abn at 4375 ft. The Texas Co.'s Jackson 1, Salt Cedars, dr 4325 ft sticky shale. Chicago Oil Corp.'s Lawrence 1, 10 mi s Barbers Hill, sd 3950 ft.

GRIMES COUNTY — Deering & Noble's Templeman 1, 6 mi s Navasota, dr 2725 ft shale; Muenke 1, ½ mi n Anderson, lcn.

HARDIN COUNTY—D. O. Speight's Gidrey 1, 4 mi s Batson, dr 2750 ft shale and lime.

HARRIS COUNTY—Humble's Simms-Smith 78, Goose Creek, dr 4200 ft hard sand; Warren 8, Hockley, dr 700 ft hard sand; Minnetex 3, Mykawa, dr 3635 ft hard sand and lime. Mrs. J. C. Baldwin's Kitzman 1, 2 mi n Cypress, sd 4250 ft. Gulf States Oil Co.'s Augspurger 1, 8 mi n Houston, dr 550 ft shale. Rich et al's Highland Farms 1, Elena, sd.

JACKSON COUNTY — The Texas Co.'s Mitchell 1, Lolita, dr 6175 ft shale. Jackson Co. Oil Synd.'s Drushell 8, Edna, dr 3575 ft rock; Lee 2, dr 3140 ft shale.

JEFFERSON COUNTY — Westbury Oil Co.'s West 1, S. Choate sur, dr 4000 ft sandy shale.

LIBERTY COUNTY — Harrison Oil Co.'s Gulf Fee 1, N. Dayton, dr 1250 ft. Saxet Oil

Co.'s Davis 1, N. Dayton, dr 3785 ft sand and shale; Wilhite 3, N. Dayson, lcn. Victor Oil Co.'s Gulf Fee 2, N. Dayton, dr 4375 ft sand and shale. Cranfill-Reynolds' Moores Bluff B-1, 2 mi se Esperson, abn 4700 ft shale. Yount-Lee's Moores Bluff 3, Esperson, dr 7375 ft shale. Gulf's McFadden 2, Moss Bluff, dr 2950 ft gbo. Humble's Breeden 1, Moss Bluff, lcn; Hylton 1, Moss Bluff, lcn; Sergent 1, Esperson, lcn.

MATAGORDA COUNTY—Empire's Baker 1, Citrus Grove, dr 2350 ft sandy shale.

MONTGOMERY COUNTY—Price & Wilhite's Juergus 2, 3 mi Conroe, sd 1900 ft.

ORANGE COUNTY—Gulf's W. H. Stark 1, Port Neches, dr 5385 ft sandy shale. The Texas Co.'s Stark 2, Port Neches, swabbing at 4595 ft.

WALKER COUNTY—Joyce Richardson et al's Smither 1, 12 mi n Huntsville, sd 3450 ft. Texas State Oil Co.'s Fails 1, nw Huntsville, dr 3850 ft gbo.

WALLER COUNTY—Kirby Pet. Co.'s Rogers 2, San Felipe, abn at 3435 ft cap rock.

WASHINGTON COUNTY — W. B. Birdwell's Schram 1, 3 mi e Brenham, sd 2105 ft. Clifton et al's Pruiss 1, 3 mi sw Brenham, sd 1600 ft.

WHARTON COUNTY—C. S. Thomas' Taylor 1, Boling, dr 1300 ft; Volny 1, Boling, sd 250 ft.

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
ST. TAMMANY PARISH—		
Washington & St. Tammany Drlg. Co., Cousack 1, 8-6s-10e		3950

ACADIA PARISH—Yount-Lee Houssiere-Latrielle 9, Evangeline, dr 6250 ft hard sand rock; Crowley 7, Evangeline, ru. The Texas Co.'s Rayne Heirs 5, Evangeline, abn at 8730 ft.

ASSUMPTION PARISH—Poor Boys Drlg. Co.'s La Barre Est. 1, Napoleonville, dr 2300 ft.

AVOYELLES PARISH — R. A. Tippett's Chatalin 1, 5-1n-3e, sd 3400 ft.

CALCASIEU PARISH — Adams Oil Co.'s Roderick 1, Starks, r to bottom. J. O. Davis' Ind. Lbr. Co. 1, Starks, r to set cas around 1000 ft, depth 3775 ft. J. G. Sutton's Ind. Lbr. Co. 1, 19-9s-12w, dr 610 ft sand. Yount-Lee's Miller 1, Lockport, 8-10s-9w, dr 5765 ft sand, no show.

CAMERON PARISH—Pure's Yount-Lee 9, Sweet Lake, completed for 1000 bbls 30 gravity oil daily at 6813 ft. Magnolia's Sweet Lake Ld. Co. 1, Sweet Lake, dr 5550 ft sand and shale. Shell's Watkins 15, Black Bayou, ru; Black Bayou State 1, dr 2625 ft sandy shale. Vacuum Oil Co.'s Cameron Meadows Ld. Co. 1, e Johnson Bayou, dr 4300 ft sticky shale. The Texas Co.'s Calcasieu Lake State A-6, dk foundation.

IBERIA PARISH—The Texas Co.'s State Vermilion Bay 5, dr 5800 ft sand. Lake Oil Co.'s Ben White 1, dr 2575 ft sandy shale.

IBERVILLE PARISH—Standard's Wilbert 5, Bayou Blue, set screen at 3225 ft, swabbing Wilbert 7, dk; Wilbert 8, dr 2620 ft sand and lime; L. Baist Cooperage Co. 1, Bayou Blue, ru; E. B. & S. P. Schwing 1, Bayou Blue, set cas at 60 ft. Shell's Wilbert 5, White Castle, dr 3825 ft. Gulf's Gay 1, Bayou Choctau dome, lcn.

JEFFERSON PARISH—Humble's Delaware Fur Co. 1, 3 mi nw Lafiitte, dr 2550 ft sand and shale.

LAFAYETTE PARISH—Pure's J. Manmotin 1, 5 mi n Lafayette, dr 5650 ft hard sand.

LA FOURCHE PARISH—The Texas Co.'s L. L. E-Leeville 1, 27-21s-22e, dr 2650 ft after sidetracking.

PLAQUEMINES PARISH—Humble's Cockrell-Moran 2, Lake Grande Ecaille, moving in piling; Cockrell-Moran 3, in cap rock cavity at 1550 ft; Lake Washington 1, Lake Grande Ecaille, depth 5440 ft, will probably abandon. The Texas Co.'s Garden Island Bay State 4, dr 2720 ft sand.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, 28-11s-4e, washing to bottom, 1875 ft.

ST. LANDRY PARISH—Hebert-Baker Oil Co.'s E. D. Fisher 1, 10-3s-4e, stuck dr stem at 4375 ft.

ST. MARTIN PARISH—The Texas Co.'s Iberville Ind. Co. 2, Hager, ru; No. 3, lcn. Yount-Lee's Hebert 2, Anse La Butte, fsh for dr pipe, salt at 6050 ft. Rycade's Woodyard Lake 1, Bayou Bouillon, dr 5325 ft hard sand; State 4, Bayou Bouillon, lcn.

ST. MARY PARISH—The Texas Co.'s South Coast Co. 1, 4 mi n Franklin, dr 7052 ft sand. La. Ld. & Ex. Co.'s Fox 1, Avoca, abn at 6050 ft sandy shale.

ST. TAMMANY PARISH—Washington & St. Tammany Drlg. Co.'s Cousack 1, 8-6s-10e, abn at 3950 ft.

TERREBONNE PARISH — Chas. Paggi's Evergreen 2, Houma, dr 1800 ft gbo. The Texas Co.'s Bay Junop 2, ru; Dob Lake A-3, moving in; Caillou Island State 3, abn at 3040 ft in cap rock; No. 4, lcn; No. 5, lcn; Lake Pelto State 4, lcn; No. 5, lcn; No. 6, lcn; Bay St. Elaine State 4, abn 5600 ft; No. 5, lcn; Lake Barre State 5, dr 1000 ft sand; No. 6, lcn; Four Isle 4, dr 1500 ft shale.

VERMILION PARISH—Gascon Oil Corp.'s Turkey Island 1, dr 1650 ft gbo.

WEST FELICIANA PARISH — Putnam Synd.'s Como Plantation 1, 54-1s-4w, coring 4750 ft.

MOUNTAIN STATES

COLORADO

ADAMS—N. M. Slatt 1, se 27-25-64w, dr 1960 ft.

ARAPAHOE—McDebb Dr. Co.'s Fitzsimmons 1, 7-45-66, prep to run 4¾-in to 5692 ft.

ARCHULETA—Outwest Inc. Co.'s Fitzhugh 1, se 34-33n-1e, dr 412 ft.

BACA—A. R. Jones Oil & Operating Co.'s Boice Cattle 1, 22-34s-42w, dr 2500 ft.

BOULDER—Reliance Oil Co.'s Anderson 1, sw 18-3n-70w, dr 800 ft.

DELTA—Crawford O&G Co.'s McKissen 1, ne 28-15s-91w, sd 1100 ft.

DOLORES—Transcontinental's Glade 1, nw 11-41n-16w, dr 6770 ft.

DOUGLAS — Perry Park Oil Co.'s Cannon 1, nw 11-9s-69w, dr 1480 ft.

EI PASO—Utemore Syndicate's Carson 2, ne 10-16s-66w, dr 1020 ft.

GARFIELD—Fulton Pet. Co.'s Permit 1, ne 8-8s-102w, dr 1365 ft.

JEFFERSON — Ruby Hill O. & G. Co.'s Braden 1, se 24-4s-59w, co 3668 ft.

HUERFANO — Parker-Club and Kinney-Coastal Fee 1, se 4-28s-69w, fsg cas 4116 ft. Ojo Exp. Co.'s Ojo 1, 5-29s-69w, dr 272 ft.

LARIMER—Smith et la's State 1, ne 36-12-70w, dr 240 ft.

LA PLATA—McGarr Pet. Corp.'s Red Mesa 1, ne 27-33n-12w, dr 2200 ft. Detroit Oil Ass'n's Olbert 1, se 9-35n-12w, stand 2623 ft. Murchison Oil Co.'s Doescher 1, nw 9-33n-13w, dr 435 ft.

LINCOLN—Kelly Oil Co.'s State 1, ne 26-14n-57w, stand 2415 ft.

MESA—Argo Oil Co.'s Hoel 1, ne 23-8s-104w, co at 2755 ft, td 3000 ft.

MOFFATT—Vermillion Oil & Gas Synd.'s 1, se 23-9n-100w, stand 642 ft. Midwest's Hannawalt 24, 4-6n-92w, dr by tools at 2935 ft. Mtn. Fuel Supply's 1, 35-12-101, dr 2165 ft. Mtn. Fuel Supply's Musser 1, 5-11-97, dr 1610 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, dr 1900 ft.

MONTEZUMA—Haller et al's Haller 2, 33-36n-14w, dr 515 ft.

MORGAN—Ind. Terr. Illum. Co.'s State 1, ne 16-1n-7w, dr 2600 ft.

PARK—So. Park Oil Co.'s Miligan 1, se 13-9s-96w, casing 800 ft. So. Park O. & G. Co.'s Esche 1, ne 5-9s-76w, dr 338 ft.

RIO BLANCO—Texas Prod. Co.'s Potter 1, se 30-2n-69w, gas at 5987 ft, blow to co. Magnolia Pet. Co.'s Fordham 1, sw 9-2s-96w, plugg back to save gas at 5130 ft.

WELD—Platte Valley Pet. Corp.'s Patterson 1, se 24-6n-61w, stand 6324 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4s-56w, stand 1260 ft.

NEW MEXICO

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, res at 3005 ft.

EDDY—Lockhart et al's Parker 2-X, se 3-17s-30e, dr 2975 ft.

LEA—Hobbs High Co.'s State 1, se 35-18s-38e, stand 3785 ft. Landreth Prod. Co.'s State 1, 7-18s-38e, dr 4500 ft. Amerada's State 1-A, ne 32-18-38, dr 4110 ft. California Co.'s State 1, se 29-18s-38e, producing at 4170 ft. Humble O. & R. Co.'s Bowers 2-A, 30-18s-38e, dr 4070 ft. Sun Oil Co.'s McKinley 1, ne 5-19s-38e, 9000 bbls at 4175 ft. Shell Pet. Corp.'s State 2, ne 32-18s-36e, dr 4020 ft. Morton et al's State 1, ne 32-11s-38e, stand 5275 ft. Tidal's Coleman 1, ne 17-21s-36e, dr 3860 ft. Atlantic Oil Co.'s State 1, ne 6-19s-38e, dr 2925 ft.

McKINLEY—J. W. Halsell's Stanta Fe 1, 17-18-9w, dr 3267 ft. Wms et al's A. T. S. F. 1, sw 19-18n-8w, dr 2245 ft. Walker Dome Oil Co.'s 1, 12-15-10, stand at 1012 ft.

QUAY—Silverstein et al, 1, 29-12n-33e, spdg 55 ft.

RIO ARRIBA—Berringer et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pet. Co.'s Gov't 1, se 14-30n-7w, dr 400 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, dr 1890 ft. Southern Union Gas Co.'s Day 1, se 20-28n-10w, gassing at 1902 ft. Childers Dr. & Prod. Co.'s Westwater 2, nw 23-31-16w, sd 2525 ft. Reserve Oil Co.'s Shager 2, ne 1-21n-14w, sd 780 ft. Rio Grande Dev. Co.'s Lanier 2, 9-29-11w, dr 1285 ft.

SAN MIGUEL — Pioneer O. & G. Co.'s Thunderbird 1, nw 14-15n-16e, wait 2355 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, 8½-inch at 3217 ft. Cizola Pet. Co.'s Crown 1, se 9-13n-14e, ready to resum 320 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 21-12n-22e, dr 1262 ft.

SOCORRO — Lockhart & Co.'s Stackhouse 2, 14-3s-6e, dr 2820 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, stand 1643 ft. J. B. Witt O. & G. Co.'s Kutchem 1, 12-17s-7e, dr 1200 ft.

VALENCIA — Rio Puerco Oil Co.'s N.M.-Ariz. Land Co. 2, ne 13-6n-2w, wtg pipe 3145 ft. Acme Oil Co.'s N.M.-Ariz. Land Co. 1, 26-6-3, stand 4741 ft. Harlan et al's Harlan 1, 5-6n-2e, dr 4372 ft.

WYOMING

BIG HORN—P. & R.'s Gov't 3, 24-56-98, sd for orders, td 4234 ft. Westland Oil, Inc., 1, 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pet. Co.'s 1, 7-57-97, dr 3912 ft.

CARBON—Red Feather Oil Co. 1, 35-13-92, spd.

FREMONT—Texas Prod. Co.'s State 1, 36-34-95, mudd off at 4472 ft. P. & R.'s 1, 33-34-92, dr shale 3990 ft.

HOT SPRINGS—Midwest's Week 8, 5-55-98, ur 2675 ft, td 2820 ft. Ohio's Smith 1, 8-46-99, wait for rotary 4403 ft. Gebo Con's 1, se 23-44-95, dr bel 1416 ft, gas and oil showing.

JOHNSON — United Oil Co.'s 7-47-92, sd 1700 ft.

LINCOLN—Midwest's Grey River 25-37-117, dr 2295 ft. Mtn. Oil Corp., 1, 36-25-115, fsg 815 ft. Wyo. Prod. Co.'s 1, 14-24-113, res 370 ft.

NATRONA—Midwest's Midway 1, se 23-35-79, bailing out water to test oil showing at 5187 ft. Golden West Oil Co.'s 1, 26-36-11, spdg. Cuyler Oil Co., sw 24-36n-85w, spdg. Sumimt Oil Co., nw 21-33n-80w, dr 510 ft.

PARK—P. & R.'s Pitchfork 1, 14-48-102, dr 3800 ft, about 2500 ft oil in hole. Resolute Oil Co.'s 1, 17-27-101, dr bel 6325 ft. Cody Pet. Co.'s Danker 1, se 22-57-98, skd rig. C. M. Johnson's 1, 11-49-102, dr 4208 ft.

SWEETWATER — Vermillion Oil Co.'s 1, se 16-12-99, stand with 10-inch cem 2650 ft.

SHERIDAN—Pfeiffer et al, 6-57-84, location.

UINTA—Park City O. & G. Co., nw 6-15n-113w, dr 1200 ft.

WESTON — Gose Synd.'s 1, 28-47-65, res 4800 ft. Updike et al's Fiddler Creek 1, 11-45-64, dr bel 1200 ft.

MONTANA

CASCADE—Andover Oil Co.'s Floweree 1, se 20-21-2w, sd 800 ft.

CHOTEAU—Texas Pacific's Lehfelt 1, rigging up.

FERGUS—Melton Corp.'s 1, se 24-21n-17e, resume at 2700 ft.

GLACIER—Glacier Oil Co.'s Omsberg 1, nw 35-35-5w, fsh job completed, td 1440 ft. Texas Prod. Co.'s 1, 13-35n-6w, dr 1400 ft. Fulton Pet. Corp.'s Blackfoot 1, ne 28-36n-12w, rigging up. O'Neill's Michaelson 1, se 28-36-5w, dr 2725 ft. B & H Oil Co.'s Haines 1, se 2-34-6w, wait for pipe 400 ft. Jeffries-Haire's Dawson 1, ne 7-31-12w, dr 150 ft.

GOLDEN VALLEY—Golden Valley Oil Co.'s 1, se 28-6-22, dr below 1200 ft.

LIBERTY—Square Deal Oil Co.'s Federal

Land Bank 1, 1-32n-7e, sd 2565 ft, ready to resume. Northland O&G Co.'s Yurman 1, 36-33n-6e, dr 2300 ft. Sunburst O&R Co.'s McLaren 1, se 9137-6e, run cas 2550 ft. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, set cas 2400 ft. Western National Gas Co.'s H. Brown 1, nw 20-37-4e, rig up.

MUSSELSHELL — Minnesota-Flatwillow's Ivanhoe Dome test, 7-11-31, to resume.

PETROLEUM — Minnesota-Flatwillow's 2, 5-13n-25e, rig burned down, td 1840 ft. Oregon-Flatwillow's 1, 3-13n-26e, td 200 ft.

PONDERA—Miller Bros.' Bruins 1, nw 17-28n-1w, rig up. Oil Well Dr. Co.'s Vam Laele 1, ne 35-30-3w, fsh tools at 4215 ft.

ROSEBUD—Prairie O&G Co.'s N. P. 1, 9-10n-39e, sd 2310 ft. Prairie's N. P. 4, 28-10n-38e, sp 260 ft. Prairie's 1-X, 26-10-39e, dr 501 ft.

SHERIDAN—Sheyenne O&G Co.'s 1, nw 15-36n-53e, to resume at 1400 ft.

TETON—Andover Oil Co.'s Carlson 1, ne 5-24n-4w, td 300 ft. Newman et al's Fitzgerald 1, 26-32n-1w, rig up. Rocky Mtn. O&G Co.'s Salmond 1, ne 4-23n-8w, sd 1700 ft. Midwest Ref. Co.'s Scott 35, ne, 2-26n-6w, dr 1000 ft.

TOOLE—Anaconda Pet. Co.'s Barlthlte 1, nw 19-36n-2w, td dd from 1600 ft. John Thomas et al's Buckley 1, ne 1-37-4w, td 1645 ft. Mont. Oil Corp.'s Beaupre 1, se 32-37-1w, sd 2320 ft. International Roy. Hold Co.'s Henry 1, se 26-35-3e, carry pipe at 2165 ft. Vantana Oil Co.'s Peterson 1, sw 22-34-4w, dr 1450 ft. O. I. C. Gas Co.'s Wolland 1, se 11-34-2e, rig up.

VALLEY—T. P. Jones' 1, nw 31-37-38e, water at 1100 ft, to dd.

OKLAHOMA

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair's Share 1, c ne sw, show oil 7137-38½ ft. rust.

ALFALFA COUNTY—T 27n, R 11w, Sec 12, Smith Brothers' Forbes 1, ne c se nw nw, td 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 17, Blankenship et al's Hansen 1, sw nw sw, 3616 ft, pb 2587-97 ft, shot 10, 20 and 40 qts, made 30 bbls.

HARPER COUNTY—T 26n, R 24w, Sec. 14, Sinclair's Howell 1, c sw sw, td 8590-6700 ft, shot 5 qts, 5300-40 ft, 7 million ft gas, fsh pipe.

GRANT COUNTY—T 26n, R 5w, Sec. 25, Bu-Vi-Bar et al's Hurst 1, c sw, dr 3145 ft.

KAY COUNTY—T 26n, R 1w, Sec. 32, Boucher et al's Jefferson 1, ne c sw, moving in tools.

HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire's Bruce 1, sw c ne ne sw, 5570 ft, dr.

WOODS COUNTY—T 25n, R 415w, Sec. 10, Bu-Vi-Bar et al's Fee 1, se c sw sw, sd 6104 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cosden's Vollmer 2, ne c se ne sw, lost tools 5640 ft, sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al's Acre 1, c sw ne, salt water 4649 ft, 8-in 4660 ft, woc.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, se c nw, sand 5566-70 ft, hfw, dr 5665 ft.

WOODWARD COUNTY—T 23n, R 17w, Sec. 23, Transcontinental & Prairie's Wilbur 1, ne c, sd 7425 ft.

GARFIELD COUNTY—T 23n, R 4w, Sec. 32, Shell et al's Loomis 1, s nw nw, show oil and water 5132 ft, hfw 6185 ft, dr 6228 ft.

WOODWARD COUNTY—T 21n, R 19w, Sec. 15, Burgoyne Bros.' Merklin 1, sw c se ne, sd 1910 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, 3220-25 ft, hfw, sd 3720 ft for water.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al's Quier 1, se c sw, sd 3970 ft. T 17n, R 4w, Sec. 34, Eason Oil Co.'s Katchor 1, sw c ne sw, dr 3165 ft. T 17n, R 1e, Sec. 22, Prairie & Slick's Simms 1, ne sw se, dr 1742 ft.

KINGFISHER COUNTY—T 16n, R 7w, Sec. 6, Gault Brown's Boch 1, c nw se (owdd), td 6022 ft, sd.

LOGAN COUNTY—T 16n, R 1w, Sec. 33, Prairie & Slick's Morgan 1, c nw ne, fsh tools 5346 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al's McFadden 1, ne c sw, rig.

OSAGE COUNTY—T 23n, R 6e, Sec. 28, Western American 1, nw c se, hfw, 1830-94 ft, dr 2500 ft.

PAWNEE COUNTY—T 22n, R 3e, Sec. 26, Wentz's Lillie 1, se c sw ne, dr 1840 ft. T 20n, R 5e, Sec. 22, J. M. Scott et al's Jones 1, sw c ne, dr 2015 ft.

PAYNE COUNTY—T 18n, R 4e, Sec. 6, F. M. Marrs et al's Tietz 1, sw nw se, lcn.

LINCOLN COUNTY—T 17n, R 2e, Sec. 28, Thurman, Dean et al's Stufflebeam 1, ne c sw, Simpson 4787-4802 ft, cored, small show. oil.

LINCOLN COUNTY—T 14n, R 6e, Sec. 5, Atlantic's Ryan 1, se c nw, dr 3150 ft. T 13n, R 4e, Sec. 2, Magnolia's Winship 1, ne c sw, dr 4735 ft.

OKFUSKEE COUNTY—T 12n, R 9e, Sec. 36, Henry Oil Co.'s Harjo 1, nw c, 3910-20 ft, water, sd. T 12n, R 10e, Sec. 3, Sheppard et al's Sheppard 1, se ne sw, td 3690 ft, water, sd.

MUSKOGEE COUNTY—T 11n, R 19e, Sec. 2, E. Mills et al's Martin 1, nw c se, sd 1001 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Patterson et al's McDuff 1, sw nw se, Wilcox 5556-60 ft, sd.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nw ne sw, 2 million gas 1800 ft, sd 2692 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec. 17, Prairie & Slick's Dills 1, c se nw, sd 6821 ft. T 14n, R 3w, Sec. 32, Mid-Kansas' Messer 1, sw c, td 6344 ft, woc. T 13n, R 3w, Sec. 35, Magnolia & Ramsey's Johnson 1, ne c sw, dr 7186 ft. T 12n, R 4w, Sec. 17, C. F. Cuniff, Tru.'s St. Joseph Orphanage 1, sw ne sw se, dr 6530 ft. T 11n, R 2w, Sec. 3, Ryan Consolidated's Lawton 1, ne c nw, dr 6895 ft.

CLEVELAND COUNTY—T 6n, R 1e, Sec. 20, Harris & McNeal's Corbett 1, c sw ne, td 6518 ft, 6330 ft, bailed, show oil-gas-water, rur.

OKFUSKEE COUNTY—T 11n, R 8e, Sec. 11, Carter et al's Keys 1, sw ne sw, sand 2620-55 ft, hfw, sd 2660 ft.

HUGHES COUNTY—T 9n, R 12e, Sec. 29, Chas. Cannady's Kanard 1, nw c sw, Wilcox 4468-4505 ft, hfw, pb to 3540 ft.

POTTAWATOMIE COUNTY—T 8n, R 3e, Sec. 3, Texas Co.'s Knight 1, sw c se, dr 2600 ft. T 8n, R 4e, Sec. 11, Lippa Drlg. Co. et al's Helinerich 1, ne c nw, dr 3210 ft. T 6n, R 4e, Sec. 30, Deep Rock's Marshall 1, sw c, dr 2240 ft.

SEMINOLE COUNTY—T 6n, R 7e, Sec. 9, Neal & Milton's Thomas 1, nw ne sw, cellar.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Bucy & Stone's Williams 1, c sw, sd 2243 ft.

BECKHAM COUNTY—T 10n, R 22w, Sec. 29, J. F. Cuniff et al's Brower 1, c nw, sd 3793 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, ne nw, sd 150 ft.

CADDO COUNTY—T 9n, R 13w, Sec. 18, J. J. Wright & Shell's Boys 1, ne c, lcn.

BECKHAM COUNTY—T 8n, R 22w, Sec. 20, Carson et al's Denby 1, sw se ne, 1625 ft, dr cement.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good & D. M. Dowell's Cliffel 1, nw c, sd 1265 ft. T 6n, R 24w, Sec. 17, I. T. I. O. et al's Fee 1, c ne, dr 2410 ft

CADDO COUNTY—T 6n, R 11w, Sec. 24, Simms Pet. & J. R. Wrightsman 1, se c nw, rig.

HARMON COUNTY—T 4n, R 24w, Sec. 17, Harmon-Tex Oil Co.'s Headley 1, ne c, sd 2325 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat. Gas Co.'s Doebel 1, ne c sw sw sw, sd 1450 ft.

COTTON COUNTY—T 4s, R 13w, Sec. 2, Shasta Oil Co.'s McMillan 1, c se se, dr 1050 ft.

HUGHES COUNTY—T 5n, R 10e, Sec. 30, Erwin et al's Jones 1, se c ne, sand 4270-75, rt, rust. T 5n, R 11e, Sec. 15, J. J. Wright's Roberts 1, se c sw, 2 million gas 915-18 ft, sand 1600-34 ft, hfw, sd 1645 ft.

GARVIN COUNTY—T 4n, R 3e, Sec. 10, C. R. Obermeyer's Stricklin 1, ne c sw, sd 2880 ft. T 3n, R 4w, Sec. 5, McMin & Arrowsmith's Carson 1, ne c nw, rig and tools.

COAL COUNTY—T 3n, R 9e, Sec. 26, Blackwell's Gumm 1, nw c, sd 3065 ft, for water.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al's Guinn 1, nw c sd, 80.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla Drlg. Co.'s Anderson 1, se ne se, 2580ft, fsh.

LOVE COUNTY—T 6s, R 3w, Sec. 20, Harry Hobbs' Steele 1, sw c ne ne sw, sd 3130 ft.

BRYAN COUNTY—T 6s, R 7e, Sec. 8, G. L. Pace's Hicks 1, sw c nw, dr 850 ft. T 6s, R 7e, Sec. 14, W. A. Johnson's Ussery 1, se c, sd 325 ft. T 6s, R 9e, Sec. 35, O. P. Bush's Commerce Trust Co. 1, ne c, sd 600 ft.

NORTH LOUISIANA

Completions

Company, Well and Location		Initial Production Bbls.	Depth
CADDO PARISH—			
DE SOTO PARISH—			
R. W. Norton, Hill 1, 33-23-16	¶	11½	5506
Ark. La. Pipe Line Co., Whitney 1, 28-10-14	*		3305
MOREHOUSE PARISH—			
Ruston Drilling Co., Tucker & Platt 1, 8-20-6e	*		3039
SABINE PARISH—			
Loring Oil Co., Bowman-Hicks 5, 34-8-12	*		4176
Shull 1, 26-8-12	*		2600
WEBSTER PARISH—			
Magnolia Pet. Co., Scroggins 4, 1-22-11		75	2717
Wingfield et al, Slack 2, 1-22-11		40	2734

BIENVILLE PARISH—Ark. La. Pipe Line Co.'s Graves 1, 22-16-10, tested dry 2031 ft, tested sw 2036 ft, r to bottom 2036 ft. Nichols et al's McDermott 1, 28-16-6w, tested 1 fourble mud, 10 ft oil, wo, 6-in cas, td 2358 ft, moving rig. S. P. Borden et al's Thomas 1, nw nw 27-16-9w, sp, dr 100 ft.

BOSSIER PARISH—Andrews & Davlin's Nattin 1, 15-22-14, cor 18 ft sand, arr ds test 1499 ft. Autrey Oil Co.'s Johnson 1, 34-19-11, sd for fuel 60 ft. McDade 1, 28-19-11, sp, set 10-in cas 89 ft, dr 927 ft. Morgan et al's Kendricks 2, 22-19-11, dr 1275 ft. Triangle Drilling Co.'s Bolinger 1, 36-23-13, dr 1200 ft.

CADDO PARISH—Falcon Drilling Co.'s Oden 1, 19-19-14, arr test 2475 ft. L. B. Mawk's Swann 1, 23-21-14, sd fuel 700 ft. R. W. Norton's Hill 1, 33-23-16, gauged 11,242,000 cu ft gas, spray very light oil, gas tested 819 gal per million ft gas, td 5506 ft.

CATAHOULA PARISH—Nick Babare et al's McGraw 1, 30-10-9e, dr 2125 ft. National O&G Co.'s Kirkland 1, 35-9-10e, dr gbo 2980 ft. La. G&F Co.'s Tensas Delta A-1, 23-6-5e, rig up.

CLAIBORNE PARISH — El Dorado Chief Oil Co.'s Dance 1, 27-20-7w, sd 2240 ft. Leue Oil Co.'s Taylor 1, 16-22-6w, sd in gbo 3004 ft. Triangle Drilling Co.'s Cox Fee 1, 6-19-5w, set 12½-in cas 1501 ft, dr 2269 ft. Baird Bros. et al's Whittaker 1, 30-20-7w, dk.

CONCORDIA PARISH—A. C. Glassell et al's Pittsfield Plantation 1, 41-8-10e, sd, wo 1453 ft. Joe Marr et al's Maxwell 1, 35-3n-8e, set 8-in cas 2000 ft, td 2820 ft.

DE SOSO PARISH—Ark. La. Pipe Line Co.'s Johnson 2, 7-11-13, tested dry 2891 ft, r to bottom. Whitney 1, 28-10-14, sw, abn td 3305 ft. Joe Burnham et al's Hood 1, 30-11-14, tested show oil and half million ft gas through ds 1960-70 ft, dr 2150 ft. Mich-Louzanna O&G Dev. Corp.'s Payne 1, 12-11-16, sd, wo 2070 ft. Gulf Ref. Co.'s Dry et al 1, 14-11-15, coring hard shale 2832 ft. J. W. Clark's Platt 1, 23-13-14, topped chalk 1513 ft, dr chalk 2005 ft. Odell & Lawton's Tidwell 1, 11-13-14, cor 2850 ft. T. L. Philp's Talbot 1, 9-13-13, dk. Pelham & Bundy's Rhodes 1, 32-13-14, cor sandy lime 2686 ft. Frank Melat's Schryver 1, 35-14-13, wosr 150 ft oil hole td 2819 ft. J. W. Clark's Tidwell 1, 22-13-14, rig up. R. O. Roy's Nelson 1, 36-15-13, dr 2500 ft. Standard Oil Co. of La.'s Dowling Bros. 2, 5-13-13, dr 1928 ft. S. A. Guy et al's Dowling Bros. 1, nw ne, 31-14-14, dk.

JACKSON PARISH—El Dorado Chief Oil Co.'s Southern Adv. Paper Co. 1, 35-15-4w, sd 1083 ft.

LINCOLN PARISH—Ark. Fuel Oil Co.'s

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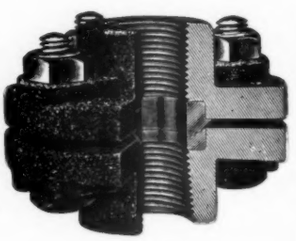

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Lewis & Co. 1, 26-20-4w, setting 6⅝-in cas 4234 ft, td 4292 ft.

MOREHOUSE PARISH—Pelican Nat. Gas Co.'s Tensas Delta 1, 17-18-6e, rig. Ruston Drilling Co.'s Tucker & Platt 1, 8-20-6e, sw abn td 3039 ft.

NATCHITOCHES PARISH—W. M. Coates et al's Collins 1, 28-9-10, cemtd 8⅝-in cas 2224 ft. S. D. McDaniels' Clark-Morse 2, 23-5-6w, sd 2536 ft. Robeline O&G Co.'s Winn 1, 7-8-9w, sd in rock 1635 ft. J. W. Cooper et al's Cooper 1, 35-11-10, rig up.

RAPIDES PARISH—Ayers Bros.' Wicklipp 1, 9-5n-2e, dr 3400 ft.

RED RIVER PARISH—E. C. Lucas' La. Delta Pecan Co. 1, 34-13-11, cemtd 6-in cas 2440 ft, 16 ft sand, td 2460 ft. Geo. L. Pace et al's Clarkson 1, 30-12-9, dr 1900 ft. Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, rig up.

RICHLAND PARISH—Austin & McDonald's Millsaps 2, 17-17-6e, sd 2697 ft. Millsaps 3, 16-17-6e, sd 2477 ft. Hunt 1, 13-17-5e, set 12½-in cas 200 ft, wo. W. C. Feazel's Landrum 1, 6-16-7e, dk. International Gas Prod. Co.'s Lagrone 1, 7-16-7e, lcn. Island Gas Co.'s Noe 1, nw se 3-16-5e, sp, dr 50 ft.

SABINE PARISH — Magnolia Pet. Co.'s Giaque 1, 26-7-14, cemtd 12½-in cas 1197 ft, dr 1237 ft. McDaniels & Lieber's Batson 1, 16-8-12, sd 2526 ft. Loring Oil Co.'s Peavy-Wilson 1, 21-6-13, ds stuck 4792 ft. Bowman-Hicks 5, 34-8-12, dry abn in sandy lime, td 4176 ft. Shull 1, 26-8-12, dr abn, td 2600 ft. Shull 2, 26-8-12, dk. Schuffert 1, 27-8-12, sp, set 12½-in cas 105 ft, dr 785 ft. Huber & Mann's Newton 1, 25-8-12, rig up. Lanier & Tarver's Newton 1, 25-8-12, dk. Texas Co.'s Giaque 1, 27-8-12, dk. R. L. Gay, Tr.'s Bowman-Hicks 8, 18-7-13, bailing, td 2552 ft. Sabine Lbr. Co. 5, 15-7-14, cemtd 10-in cas 70 ft, dr 600 ft. Le Grande et al's Giaque 1, 6-7-12, lcn abn. J. W. Hale 1, 1-7-13, lcn. D. H. Reddick et al's Scretchfield 1, 18-9-12, sd 3280 ft. Paramount O&G Co.'s Woolums 1, 11-6-12, dr 2040 ft. Zeke Lohman's Wyatt Lbr. Co. 1, 18-4-11, rig up. Lohman & Walker's Hubley 1, 21-7-11, arr set 8-in cas 1313 ft after gas blowout 1311-13 ft. Pelican Nat. Gas Co.'s La. Long Leaf 3, 4-7-11, set 6-in cas 2318 ft, topped marl 2330 ft, completed making 8-10 million ft gas, drilled self deeper flowing 1200 bbls 40.2 grav oil day through ¼-in choke, td 2334 ft. Sabine Lbr. Co. 3, 6-7-11, top marl 2225 ft, set 6-in cas 2222 ft, bailing td 2237 ft. Stacey et al's Polly 1, 18-8-12, rig up. Longoria et al's Belton 1, 31-9-12, rig up. Boone, Tr.'s Hill 1, 4-6-11, dk.

UNION PARISH—Fred Stovall's Murray 1, 32-23-4e, rig up.

WEBSTER PARISH — Sarepta Oil Co.'s Gardner 3, 6-22-10, dk. Ideal O&G Co.'s Coyle 1, 24-23-11, dk. Magnolia Pet. Co.'s Sallie Coyle 2, 2-22-11, dr chalk 2500 ft. Scroggins 4, 1-22-11, 8 ft sand, pumping 75 bbls oil 150 bbls sw, td 2717 ft. Wingfield et al's Slack 2, 1-22-11, pumping 40 bbls oil, td 2734 ft, 6 ft brown sand. J. P. Evans et al's Crichton 1, 31-18-8w, dr shale 1208 ft.

ARKANSAS

Company, Well and Location	Initial Production Bbls.		Depth
DREW COUNTY—			
McClintock & Goedke, Ogle 1, 35-13-5		*	2625
MILLER COUNTY—			
Lenz et al, Johnson 1, 24-15-26	25		2847
POPE COUNTY—			
Ark. La. Pipe Line Co., J. E. Moore 1, 16-9n-21w	38	¶½	1314
SEBASTIAN COUNTY—			
Ozark Nat. Gas Co., Weaver 1, 27-8-30		¶¾	2910
UNION COUNTY—			
H. L. Hunt, Pratt 6, 7-18-15		*	2214
Marine Oil Co., Thompson A-4, 10-18-13	500		3555
South El Dorado Oil Co., Traylor 1, 9-19-13	4		2185

ASHLEY COUNTY—J. C. Marcum's McCurry 1, 10-19-4, tested sw 3555 ft, plug back for re-test.

CALHOUN COUNTY—Tidal Oil Co.'s Ark. Timber 1, 3-16-14, dr shale 3335 ft.

CLEBURN COUNTY — Cosden Oil Co.'s Donithan Lbr. Co. 1, 19-9-10, arr set 8¼-inch

cas, td 3846 ft (corrected depth). Donnell et al's Fee 1, 33-11-9, dr shale 1660 ft.

COLUMBIA COUNTY—Sam Y. Dorfman's Merrick 1, 16-17-20, sd 650 ft.

DREW COUNTY—McClintock & Goedke's Ogle 1, 35-13-5w, junked abn, td 2625 ft.

FRANKLIN COUNTY—Red Bank Oil Co.'s Hamm 1, 33-10-4, dr sandy shale 2884 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, dr sandy lime 3684 ft.

GRANT COUNTY — J. R. Lockhart's Cunningham 1, 11-5-16, dk.

HOT SPRINGS COUNTY—Cleary Bros.' Hansen 1, 19-4s-16w, set 12½-inch cas 72 ft, set 10-inch cas 200 ft.

JOHNSON COUNTY—Ark. La. Pipe Line Co.'s Cline 1, 16-10-24, set 7-inch cas 3325 ft, bailing cas, td 3325 ft. Blackwell O.&G. Co.'s Wyver 1, 21-8-23, jarring out 6-inch cas 2100 ft, td 5600 ft. Conn Gables et al's Holing 1, 20-9-25, sd 2070 ft.

LAFAYETTE COUNTY—Crawford Drilling Co.'s Vaughn 1, 25-19-25, rig up.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Buck Oil Co.'s Taafe 1, 25-12-32, sd 2505 ft.

LINCOLN COUNTY — B. F. Thompson, Tr.'s McGehee 1, 8-8-7, rig.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Fowlers' White 1, 13-6-26, ur 5 3/16-inch cas 3570 ft, td 3610 ft.

MADISON COUNTY — J. W. Baxter's Hallem 1, 17-16-26, sd 540 ft.

MILLER COUNTY—Lenz et al's Johnson 1, 24-15-26, set 6-inch cas 2844 ft, flowing est. 25 bbls oil daily, td 2847 ft.

OUACHITA COUNTY — Anderson et al's Buck 1, 7-15-17, fsh 2723 ft. Belmont et al's Buck 1, 16-15-17, set 12¼-inch cas 120-ft wo. A. B. Turner, Tr.'s Brown 1, 23-15-18, set 10-inch cas 103 ft, wo.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, lcn.

POPE COUNTY—Ark. La. Pipe Line Co.'s J. E. Moore 1, 16-9-21w, set 10-inch cas bottom hole making est 38,600,000 cu ft dry gas, td 1314 ft.

SCOTT COUNTY — Heavener O.&G. Co.'s Reser 1, 36-4-26, straightening hole, td 1530 ft.

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29, tested sw, sd, wo 3515 ft. Mansfield Gas Co.'s Fee 14, 1-4n-31w, sd for water 380 ft. Ozark Nat. Gas Co.'s Weaver 1, 27-8-30, making est 850,000 cu ft dry gas, 5 ft sand, td 2910 ft.

UNION COUNTY—H. L. Hunt's Pratt 6, 7-18-15, sw abn, td 2214 ft. Hickman et al's Hogg 1, 35-16-17, fsh 2157 ft. Marine Oil Co.'s Thompson A-4, 10-18-13, set 6⅝ cas 3548 ft, flowing 500 bbls oil day by heads free of sw, 6 ft sand, td 3555 ft; W. B. Thompson B-2, se ne 10-18-13, lcn; P. Winn Est. F-1, ne se 10-18-13, lcn. South El Dorado Oil Co.'s Traylor 1, 9-19-13, pumping 4 bbls oil 30 bbls sw day, td 2185 ft. Sunby et al's Perdue 2, 23-16-14, sd 3207 ft.

WASHINGTON COUNTY—Taylor et al's Runny 1, 1-13-29, sd 700 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY—J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-21, sdtr 5 3/16-inch cas 4120 ft, td 4160 ft.

EAST TEXAS

CASS COUNTY—Phillips Pet. Co.'s Olds 1, Stephenson sur, rig up.

HARRISON COUNTY — Shell Rock Pet. Co.'s Daugherty 1, W. D. Burris sur, dr 3513 tf.

MARION COUNTY—W. D. Chew's Fee 1, Wm. Hamilton sur, set 6-inch cas 2550 ft. P. E. Hussey et al's Trammell 1, Chas. Lockhart sur, dr shale 1217 ft.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, sd 2005 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Barnett Lbr. Co. 1, S. B. Hendricks sur, rig up. Ark. La. Pipe Line Co.'s Brumble A-2, Jno. Womack sur, dr lime 4348 ft.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, dr 1100 ft.

SHELBY COUNTY—Chapparal Oil Co.'s Holt 2, Matthew Moore sur, sd 3300 ft.

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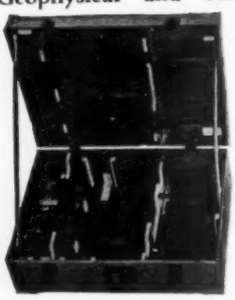

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RANKIN COUNTY (Jackson Dist.)—Jackson O.&G. Co., Patton 1, 17-5-2e * 2549

ADAMS COUNTY (Natchez Dist.)—A. C. Glassell et al's Stowers 1, 28-8-2w, set 12¼-in cas 246 ft, cor 873 ft.

ALCORN COUNTY — Alcorn Pet. Co.'s Matthews 1, 14-2s-7e, fsh junk td 2735 ft.

CHICKASAW COUNTY — Hightower & Golson's Fleming 1, 30-13-3, sd 1414 ft; Fleming 2, 15-13-2w, dk pat.

HINDS COUNTY (Jackson Dist.) — Mrs. Ella Rawls Reeder's State Land 1, 25-6-1e, fsh 3-inch dr pipe, td 2905 ft. Capitol O.&G. Co.'s Brown 1, 28-6-1e, topped Midway chalk 2499 ft, cemtd 6⅝ cas 2496 ft, td 2503 ft, elev. 302 ft; Clark 1, 10-5-1e, cemtd 8¼-inch cas 2490 ft, top chalk 2501 ft, elev. 266.3 ft. Dome O.&G. Co.'s Elton 1, 5-4-1e, sd in gray sandy shale 2775 ft. Jackson O.&G. Co.'s Central Cotton 1, 3-5-1e, dk; Mayes 2, 2-5-1e, setting 6⅝ cas, topped black shale 2340 ft, topped chalk 2439 ft. Love Pet. Co.'s Dreyfuss 1, 10-5-1e, sp, dr sand 600 ft. Marine O.&G. Co.'s Country Club 1, 31-6-1e, cored crystallized limestone, sd wo fuel 3019 ft. Miss- Tex. Oil Co.'s Negro Fair Assn. 1, 28-6-1e, dk. Tri-State O.&G. Co.'s Wilson 1, 23-6-1e, dk. Universal O.&G. Co.'s Holliday & Ross 1, 8-6-2e, dr rock 2175 ft; Sharbrough 1, 28-6-1e, set 10-inch cas 88 ft wo. Feazel O.&G. Co.'s Millstein 1, 2-5-1e, sp. Gulf Ref. Co.'s Crane 1, 26-6-1e, lcn; City of Jackson 1, NW SE 10-5-1e, lcn.

KEMPER COUNTY (DeKalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LAFAYETTE COUNTY—F. E. West et al's May 1, 22-10-1w, rig up wo.

LAUDERDALE COUNTY (Meridian Dist.)—Lauderdale O.&G. Co.'s Lackey 1, 2-7-16, sd wo 3434 ft. Meridian Nat. Gas Co.'s Mattie Houser 1, 33-8-18, sd, wo in sandy shale 2826 ft.

MADISON COUNTY (Jackson Dist.)—Barney Kennedy et al's Raymond 1, 32-7-2e, rig up.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, 2-13-19, sd wo 2912 ft. Frank Bowser's Cowart 1, 2-12-19, sd 85 ft. Associated Oil Royalties' School Board 1, 16-15-17w, rig up.

RANKAN COUNTY (Jackson Dist.)—Jackson O.&G. Co.'s Patton 1, 17-5-2e, drill pipe frozen, lost returns after topping midway chalk 2546 ft, junked abn, td 2549 ft. Love Pet. Co.'s Moore 1, 28-6-2e, sd 900 ft. Ohio Oil Co.'s Payne 1, 12-5-1e, topped black shale 2303 ft, arr set 6⅝ cas. Gulf Ref. Co.'s Hatfield A-1, 7-5-2e, rig up. Pearl River O.&G. Co.'s Pate 1, nw se 12-5-1e, dk. Southern Pet. Co.'s Investment 1, nw se 12-5-1e, dk.

WARREN COUNTY (Vicksburg Dist.)—Henderson et al's Dornbusch 1, 8-18-15, sd with ds in hole, td 2475 ft.

WEBSTER COUNTY — Cumberland Oil Co.'s Henley 1, 15-21-11, ta 1865 ft.

WILKISON COUNTY (Natchez Dist.)—A. C. Glassell et al's Belz-Hoover 1, 1-5-2w, dr gummy lime 3690 ft.

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collett et al's Blackmer 1, 14-11-4w, dr below 2300 ft after sdtr collar, td old hole 2434 ft.

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ALABAMA

HOUSTON COUNTY—J. R. Sealey's Fee 1, 13-1n-27e, changing from cable tools to rotary, td 3100 ft.

LAUDERDALE COUNTY—P. J. McAlpine's O'Neal Hrs 1, 8-2s-13w, re-set 8¼-inch cas in white limestone 1908 ft, dr hard white limestone 1910 ft.

MORGAN COUNTY—Albany-Decatur O. & G. Co.'s English 1, 6-6-4, fsh for cas 4130 ft.

SUMTER COUNTY—B. W. Bates' Fee 1, 3-18-1w, ta 1200 ft; Fee 2, 3-18-1w, rig up wo.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft; Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, no report.

TENNESSEE

DECATUR COUNTY—Chester County O. & G. Co.'s Montgomery 1, sd 1881 ft.

SOUTHERN CALIFORNIA

CORONA—Western Gulf's Abacherli 1, new lcn.

COMPTON—Central Heights Oil Corp.'s Veach 1, will re-dr to 2800 ft. Tenacity Oil Co.'s Del Amo 1, fsh for drill pipe, td 8500 ft.

EL MONTE—Los Gatos Oil Co.'s Sing 1, dr 1910 ft.

FULLERTON—L. C. Simmell's Todd 1, dr gray sand 2450 ft; Fricke 1, lcn.

MONETA—Ohio's Fish 1, dr shale 7200 ft.

MONTEREY PARK—Celito Oil Co.'s Jepson 1, to make test, td 5275 ft.

NEWHALL—Dudley-Newhall Synd.'s No. 1, rigging up rotary. M. K. T. Oil Co.'s Farrier 1, lcn. National Securities Co.'s Seeple 1, dr shale 1240 ft. Southern California Drilling Co.'s Needham 4, dr shale 1015 ft. Yorks and Lockhart's Clampitt 3, dr out cmt 1690 ft.

NEWPORT—Standard's Irvine 1, dr shell 1640 ft.

PLAYA DEL REY — Cory, Randall and Clarke's No. 1, rigging rotary. Olympic Oil & Realty Co.'s No. 1, rigging rotary.

PUENTE HILLS—Bardeen Oil Co.'s Didier 1, dr shale and sand 3530 ft. Marcell Oil Co.'s Marcell 1, coring shale 2616 ft. Rio Hondo Oil Co.'s Rowland 1, dr oil sand and shale 2850 ft. Union's Sansinena 11, dr oil sand and shale 4538 ft. Western Gulf's Diamond Bar 1, loosening drill pipe 6590 ft.

ROSECRANS—Tri-State Oil Co.'s No. 1, co 4380 ft.

SAN FERNANDO—Shell's Andrews 1-1, dr 4238 ft.

SANTA FE SPRINGS—L. S. Hartman's Campos 1, dr gray sand 4228 ft. Union's Orchardale 1, dr shale and shell 3755 ft.

SAN JUAN CAPISTRANO—O. K. Carr's Foster 2, dr shell 4228 ft.

TORRANCE—California Ventura Oil Co.'s Holston 1, 8⅝-in cas cmt 2770 ft, td 3390 ft. Rio Grande's Watson 1, dr shale 6235 ft.

NORTHERN CALIFORNIA

Completions

CASITAS PASS—
Standard, Shepard 2, 26-4-25 ..... * 1497

ORELLA—
Shell, Orella 1 ..... * 2360

KERN COUNTY

BELRIDGE—Richfield's Belridge 1, 22-27-20, dr shale 2768 ft. Rio Grande's Garcia 1, 18-28-22, fsh 3680 ft. K. C. Wallace's No. 1, 32-29-21, dr brown shale 3509.

BUENA VISTA—Federal Drilling Co.'s No. 1, 20-31-24, sp.

BUTTONWILLOW — Nordon Oil Corp.'s Salisbury 1, dr shale 4588 ft.

COMANCHE POINT—W. W. Stabler's No. 1, 4-11-18, dr shell 1768 ft.

EDISON—Petroleum Securities Co.'s Johnson-Moss 1, 14-29-29, dr shale 2050 ft.

EL TEJON—Elmer Oil Co.'s Tejon 1, 15-30-30, fsh for drill pipe 4980 ft. J. J. Ritchie's No. 1, 33-11-19, dr sand and shale 1466 ft.

McKITTRICK—The Ohio Oil Co.'s M. M. 1, 32-20-22, dr hard sand 6940 ft.

PATTIWAY — H. A. Bardeen's Ramsey 1, 10-10-23, dr hard sand, gas showings 3475 ft.

SEMITROPIC—Shell's Williams 1, 17-27-23, dr shale 4988 ft.

SHALE HILLS—Rio Cal Petroleum Co.'s No. 1, 2-27-8, dr shale 1578 ft.

WEED PATCH—Shell's Porter-Day 1, 29-

Oval Shape of Body of Bit Prevents Balling Up

The oval shape gives the T-I-W CHRISTIAN BIT an important advantage over flat bodied bits. When this oval bit is rotating, there is less tendency for balling up, a feature that is not only immediately evident to the causal observer, but is conclusively proven by test and field experience.

A Short Bit and a Long Bit Both in One

The T-I-W Christian gives you all the advantages of a short bit and a long bit, without the disadvantages of either. Straight water courses put the maximum water pressure close to the cutting edge without losing the advantages of a straight hole.

Speed and a Straight Hole

Great drilling speed means reaching the pay sand quicker and saving dollars for the oil man. A straight hole means less trouble and contributes to the speed of the bit.

Write for Illustrated Folder

TEXAS IRON WORKS

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The following pipe line equipment. All equipment has been thoroughly overhauled, painted, and put in first class condition.

3—Ingersoll-Rand 7x6 Type 20 Air Compressors
8—250-gallon capacity paint pots
4—Model 36 Buckeye Ditchers
6—Lincoln Arc Generators.
4—Oxweld Generators—Style 100 M.P.
7—Fordson Tractors equipped with full crawlers and booms.
3—"30" Caterpillars equipped with bulldozers.

Tents, flies, blankets, iron cots, Frostkiller heating stoves, kitchen ranges, cooking and table ware.

UINTA PIPE LINE COMPANY

P. O. Box 2264, Salt Lake City, Utah

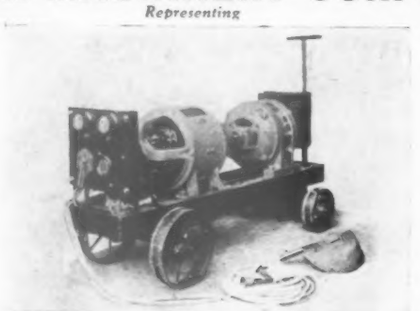
D. S. MAIR MACHINERY CORPORATION

Representing

Jos. T. Ryerson and Son, Inc.

Whiting Corporation

Davis Boring Tool Co.



Landis Machine Company

Niles Tool Works

STANLEY MAIR
505 Esperson Bldg.
Houston, Texas
Phone Fairfax 1466

CHAS. J. HARTER
10th Floor Santa Fe Bldg., Section 2
Dallas, Texas
Telephone 7-2874

WILSON ELECTRIC ARC WELDERS IN HOUSTON AND DALLAS STOCKS
LANDIS BOLT AND PIPE THREADING CHASERS IN HOUSTON STOCK

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The American Well Works manufactures a complete line of oil well pumping units. They are made in a wide variety of sizes permitting a length of stroke of from twelve to fifty inches. All gears are enclosed and run in a bath of oil. Used throughout the oil fields of the world. Catalogs and engineering data upon request.

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THE AMERICAN WELL WORKS
General Offices AURORA, ILLINOIS and Factory

Athey
Truss Wheel
Oil Field Wagons

Ideal for heavy duty behind tractors, either singly or in train. • • • Made in 10, 15 and 20-ton capacities for hauling heavy loads where transportation over soft ground is a problem. • • • • • • • Write for complete information.

ATHEY TRUSS WHEEL CO.
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Engineers & Geologists
TULSA, OKLAHOMA

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REPORTS-COMMERCIAL & TAX

SURVEYS
ESTIMATES OF OIL RESERVES

AN EXPERIENCED OIL FIELD ORGANIZATION

ALLSTEEL THROUGHOUT
HYATT BEARINGS
CARDWELL
REG. U. S. TRADE MARK PAT. OFF.
QUALITY IS ALWAYS ECONOMY
MANUFACTURERS OF
OILFIELD WINCHES, PIPELINE WINCHES AND BACKFILLERS
Auxiliary Equipment For "Caterpillar" Tractors
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PHONES L. D. 126; 4-4381 L. D. 289; 4-4382
WICHITA, KANSAS U. S. A.
DIAMOND CHAINS
NIKROME SHAFTS

30-29, made oil and water on production test, will deepen from 5029 ft.

SANTA BARBARA COUNTY

Campbell's Point—Bolsa Chica Oil Corp.'s Augur Permit 191-1, 24-4-9, dr shale 1180 ft.

CASMALIA—Wildcat Oil & Royalty Co.'s Donivan 1, 20-10-35, dr 5100 ft.

EL TORO—Shell's Fithian 1, 18-4-25, 8⅝-inch cas cmt 2450 ft, td 4390 ft, hole bridged off below 3000 ft.

GATO RIDGE — Barnsdall's Tegnazzini 1, 9-8-32, dr shale 2717 ft.

GOLETA—General Pet.'s More 3, dr shale 200 ft.

LOMPOC—Prairie Oil & Gas' Shyvers 1, 11-7-35, dr gray sand 4615 ft.

LOS ALAMOS — Midwest Refining Co.'s Wilson 1, new lcn.

NAPLES—J. H. Cochran's No. 1, 7-4-29, dr shale 1658 ft.

POINT CONCEPCION—Standard's Gerber 1, dr gray sand 5425 ft. Universal Consolidated's Concepcion 1, 30-5-34, dr shell 3950 ft.

PURISIMA—Vaqueros-Major Oil Co.'s Annex 1, 6-7-33, rig.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, rig. O. C. Field's Norswing 1, 8-9-33, dr shale 4200 ft; Bradley 1, 5-9-33, rig.

VENTURA COUNTY

FILLMORE—General Pet.'s Burson 1, 6-3-19, coring shale and sand 2950 ft.

HOPPER CANYON—Rio Grande's Lankershim 1, 13-4-19, re-dr 1755 ft. George H. Hadley's No. 1, 13-4-9, sd 850 ft.

LOCKWOOD—Lockwood Valley Oil Co.'s No. 1, 32-8-21, lcn.

PIRU—Bolsa Chica's Snow 1-A, 4-4-18, dr oil sand 2500 ft. A. N. Macrate's No. 1, 32-4-18, rig.

RINCON—Associated's Snowball 1, 19-4-24, sd 2082 ft. Chanslor-Canfield Midway's Hobson A-2, 23-3-24, sd 7480 ft.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, dr gray sand 5675 ft.

SANTA PAULA—W. W. Bryant's Anlauf 3, 21-4-21, dr gray sand 1300 ft. Empire Oil Co.'s Steen 4, 13-4-21, pulling 4¾-inch cas, td 3840 ft. George C. Thompson's No. 1, 15-4-21, dr shale 1555 ft.

SESPE—Superior's Kirtlan 1, 15-4-21, rigging up rotary.

SIMI—Richfield's Tapo 1, dr shale 500 ft.

SOMIS—Shell's Everett 1, dr shale 2735 ft.

VENTURA—Prairie Oil & Gas' Sexton 1, 30-3-22, dr shale 6800 ft.

MISCELLANEOUS

FRESNO COUNTY—R. Oiler's No. 1, 14-20-14, dr shale, oil showings 400 ft. Ohio's Welch-Brix A-1, 8-21-15, dr hard sand 2818 ft. Associated's Mitchell 1, new lcn. Richfield's Schrock 1, 33-22-16, dr gray sand 2960 ft.

KINGS COUNTY—Hornaday and Huggins' No. 1, 32-14-18, fsh 5066 ft. J. E. O'Donnell's No. 1, 7-23-20, fsh for drill pipe 4310 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 4120 ft.

MONTEREY COUNTY — Standard's Piedmont 1, 23-22-7, dr hard sand 5022 ft.

STANISLAUS COUNTY — Oakdale Oil Co.'s Gilbert 1, 3-2-10, will resume operations, td 3520 ft.

SAN LUIS OBISPO COUNTY—Panorama Oil Co.'s Panorama 1, 7-31-21, sdtr 6¼-inch cas, td 4010 ft. Paso Robles Syn.'s Emerick 1, 34-27-11, dr hard sand 3918 ft. Pismo Dome Oil Co.'s Pricco 2-A, 5-31-13, dr shale 2658 ft. Texas Pacific Coal & Oil's No. 1, 25-32-14, will deepen from 4000 ft.

TULARE COUNTY—Ford Alexander's No. 1, 34-22-27, lcn. Colton Drilling Co.'s Henshaw 1, 34-22-27, rig. Consolidated Properties' No. 1, 35-22-27, dr shale 1000 ft. Larson Oil Co.'s Best 1, 11-23-27, dr 200 ft. Paul M. Lewis' No. 1, 15-22-27, lcn. Payatt Oil Co.'s Henshaw 1, 34-22-17, rig. Terra Bella Drilling Co.'s Rushing 1, 34-22-27, will make production test at 924 ft. Terra Bella Oil Co.'s Gardiner 1, 35-22-27, bailing for production test, td 918 ft. R. L. Turner's No. 1, 34-22-27, dr shale 433 ft. Western Exploration Co.'s Gardiner 1, 35-22-27, will test above granite, td 1022 ft.

YOLO COUNTY—George F. Getty's Guinda 1, 23-12-3, rig.

ELIMINATE CROOKED HOLES

Double Check Your Drilling Progress

WHILE less haste seems to be the order of the day in drilling, that alone does not guarantee that the hole is headed in a true vertical direction. Artificial checks must be employed to make sure that the hole is truly straight and deviation from the vertical can then be rectified.

The greatest advancement in well surveying has been made possible by the invention of the SYFO CLINOGRAPH (Patents pending).

The SYFO has these outstanding advantages:

1. A *direct* and *accurate record* of the vertical inclination.
2. Record is *easily* obtained, without the use of acids with their danger to the operator.
3. The test is *quickly* made.
4. The record is made *on paper* which can be *filed* for reference.
5. The daily use of the SYFO enables the driller to *immediately* correct any deviation from the vertical.
6. The SYFO is *extremely durable* and will last for years without any decrease in efficiency.

The SYFO CLINOGRAPH is not sold. It is furnished in two standard sizes and may be leased at nominal rates. Many SYFO instruments are already in daily use. In fact SYFO has proved so satisfactory that some producers when writing into their drilling contracts fixed limits from the vertical, use the SYFO test record sheets as evidence before accepting the completed well.

Send for a copy of SYFO CLINOGRAPH Catalogue.

The Sperry - Sun Well Surveying Co. will exhibit in Booths 29 and 30 in the Scientific and Technical Building.

SYFO CLINOGRAPH

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Main Office - 1608 Walnut Street

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THE LOWLY NAPKIN

TEACHES A DAILY LESSON IN GUIBERSON CATCHER TUBING PROTECTION

Napkins protect us from soiled clothing and their popularity may be seen by the way people demand them from forgetful waiters. For, careful as we can be, accidents will happen, and woe be to the one who has nothing below.

It is this tendency toward precaution in everybody which is responsible for the popularity of the Guiberson Tubing Catcher. The Guiberson Tubing Catcher, suspended at the foot of a string of tubing, in the event of an accident, will stop the falling tubing within three inches. Dove-tail tracks guide the slips instantly and accurately to the casing walls. Strong spring operates with or without fluid in the hole. Heavy striker weight overcomes the retarding action of mud or paraffin

Fully patented

Suspending a string of tubing without the Guiberson Tubing Catcher at the bottom is something like eating a bowl of Indelible Raspberry Custard over a $5,000 pair of white pants *without a napkin*.

"Better Be Safe Than Sorry"
THE GUIBERSON CORP.
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave., Los Angeles
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GUIBERSON

BETTER BE SAFE THAN SORRY

New Equipment for the Field

Machinery - Tools - Catalogs - Books

New Combination Flow Choke

OIL CENTER TOOL COMPANY

Oil Center Tool Company is manufacturing a new forged steel combination flow choke which has an inserted bean of heat-treated tool steel. This change has been made for the purpose of giving longer life against hazardous cutting of sand.

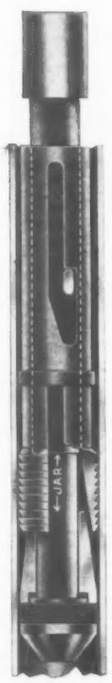
The arrangement on this new combination flow bean is such that no flow lines need be disconnected, thus reducing the time necessary to make a bean change from approximately 20 minutes to as quick as three minutes.

More complete details on this new product will be furnished by the manufacturers upon request to their headquarters, 924 Adelle Street, Houston.

Releasing Spear

E. & M. TOOL COMPANY

E. & M. Tool Company, Sulphur, Louisiana, is manufacturing and distributing an automatic release spear which was designed primarily for multiple pulling of oil well screen and liner. Patent is pending on this new product.



The spear design is such that the operator may release and take hold as many times as is necessary without removing the spear from the hole, that is, the screen or liner may be cut into a number of pieces, and by pulling each piece loose as the spear is let down into the hole, several pieces may be pulled at one round trip.

In the event the drill stem should be pulled apart the spear releases automatically allowing the stem to be fished out with the overshot or tap as desired.

The driver type spear, also a product of this company, offers new advantages in that when it is attached to the fish flange, which is a part of the release, the sleeve sets on top of the fish which also acts as a stop. If the fish cannot be pulled the driving feature is brought into operation by taking an upward pull and suddenly slacking off with the draw-works. The top collar, or sub, strikes the flange with a terrific blow. By repeating this operation a number of times the fish may be jarred down slightly, loosening hold around the fish and enabling it to be withdrawn from the well. In the event this operation should fail, the packer may be brought into use by holding an upward pull on the fish, expanding the packer and pumping fluid down through the spear, giving a hydraulic ram effect in an upward direction against the fish or else washing around the outside.

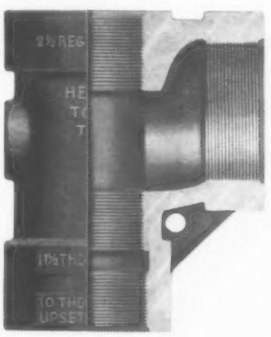
Another advantage of the packer is that it releases when the pull on the drill stem is relieved, allowing circulation to start inside the fish and around the drill stem.

After above-described operations have been performed and the fish fails to loosen, spear may be very easily released by first taking an upward pull with drill stem—second, slacking off on draw-works which allows jar to kick mandrel from slip, then turn drill stem slightly to right, pulling upward at the same time which turns key into releasing slot, allowing spear to be withdrawn from fish with ease.

Upset Flowing and Pumping Tee

HERCULES TOOL COMPANY

Hercules Tool Company, Tulsa, announces the marketing of the new Hercules combination threaded tee, with both upset and regular threads, which is designed for use on either regular or upset thread tubing. Its purpose is to simplify the connecting up of a well for either pumping or flowing by air or gas lift.



Hercules Tee

This design eliminates cutting off the upset threads on the tubing to make a connection, or the use of a swage nipple for reducing from upset to regular threads.

This tee has an upset and regular thread on the bottom to screw on the tubing; a regular thread on top for stuffing box or other connections; a 90° side outlet for lead line, or for connecting a flow line. (All 2½-inch tees have a three-inch side outlet). On the back side of each tee there is a one-inch opening for a bleeder valve if used on a pumping well, or for connecting a pressure gauge if used on air or gas lift.

This tee, shown herein, is made of a high-grade chrome nickle iron and is tested for 3000 pounds pressure.

Literature describing the new tee is available upon request to Hercules Tool Company, Tulsa.

Tubing Elevator

BYRON JACKSON COMPANY

Byron Jackson Company, Los Angeles, announces that a new size BJ elevator for handling two-inch, 2½-inch, three-inch and 3½-inch tubing will shortly be placed on the market to handle safely the extreme lengths of tubing rapidly becoming common in oil field practice. The BJ side door slip elevator can be snapped on and off the tubing, pipe or casing, without removing cement heads, or circulating heads. The spring-floated slips can be set by hand at any point desired, or will set positively when the collar or coupling contacts them. Full information will be mailed on these elevators upon request to the company's Los Angeles office.

Byron Jackson Company has recently received an order

from one foreign company for 24 of the BJ side door slip elevators, the order consisting of eight of each of the three popular sizes now manufactured, the 13⅜-inch, 10-inch and seven-inch.

Tubing Snubber Device

CAMERON IRON WORKS

Cameron Iron Works, 711 Milby Street, Houston, has devoted much time to the development of equipment for snubbing tubing under pressure. The result is a simple method, easily set-up and used.

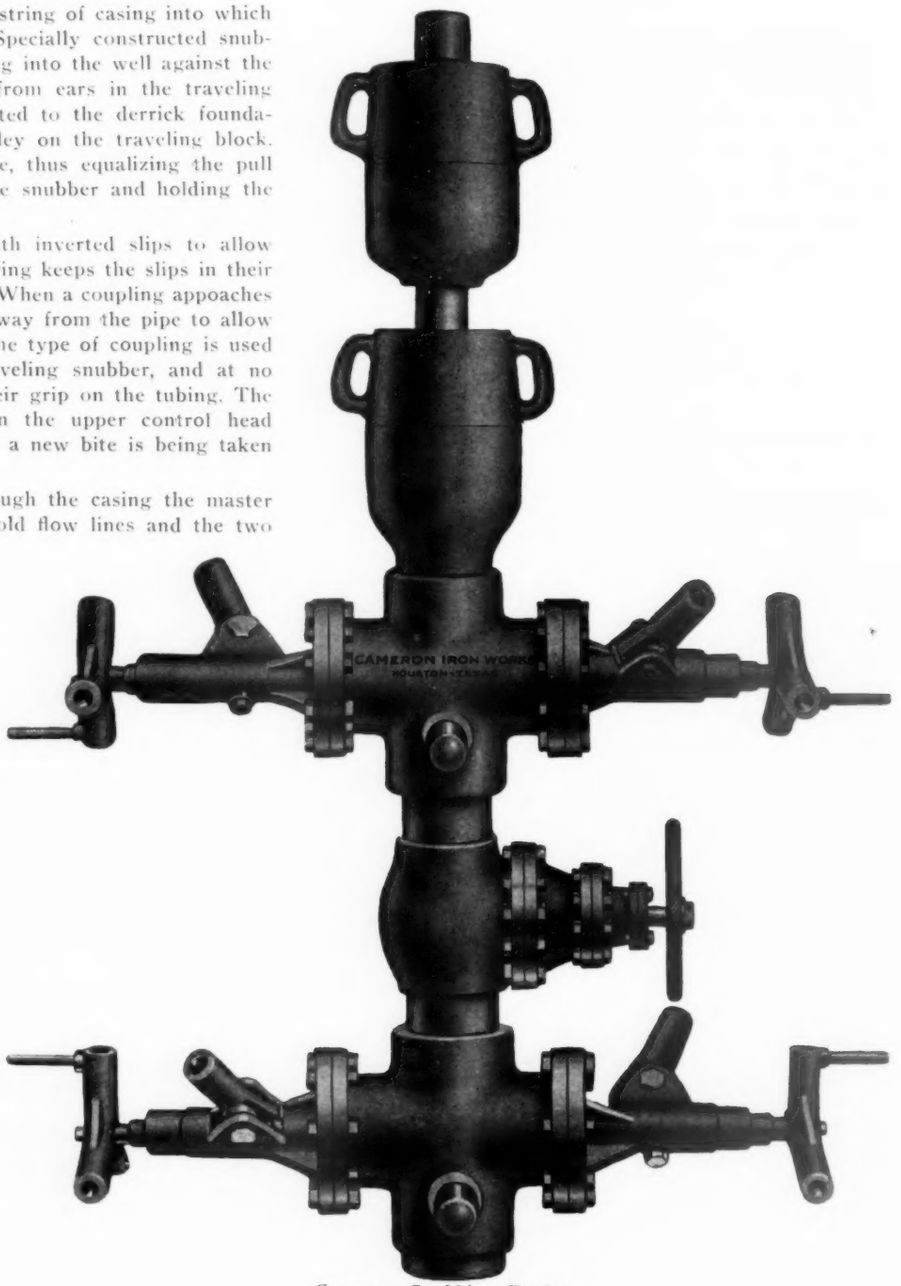
C-I-W tubing control heads are mounted, with a gate valve in between, onto the last string of casing into which the tubing is to be snubbed. Specially constructed snubbers are used to force the tubing into the well against the pressure. Wire lines are run from ears in the traveling snubber through sheaves mounted to the derrick foundation, and thence back to a pulley on the traveling block. This is a single continuous line, thus equalizing the pull down force on both ears of the snubber and holding the tubing on a straight course.

These snubbers are fitted with inverted slips to allow the passage of couplings. A spring keeps the slips in their proper position in the snubber. When a coupling appoaches the slips they push down and away from the pipe to allow the couplings to pass. This same type of coupling is used in both the stationary and traveling snubber, and at no time are both released from their grip on the tubing. The stationary snubber mounted on the upper control head holds the tubing in place while a new bite is being taken with the traveling snubber.

If the well is producing through the casing the master gate is closed above the manifold flow lines and the two Cameron heads mounted on top of the closed gate valve while the well is allowed to continue flowing through the original manifold flow lines. If the well has tubing in it and has been completed with a Cameron control head the gate valve above the control head is closed, the manifold removed and another control head mounted above the gate valve. The snubbing procedure is then ready to start. The first joint of tubing is fitted with a cast disc or trip valve to keep the inside dry while going in the hole. The disc is broken or valve opened when it is desired to allow gas or fluid to enter the tubing.

The gate valve remains closed until the collar of the first joint is below the rams in the upper control head. When the collar has passed the rams they are closed around the tubing, and the gate valve is then opened. The pressure of the rams around the tubing is then released slightly and the tubing forced into the well by an upward pull on the traveling block. The stationary snubber, with its inverted slip, allows the tubing to enter the hole but holds it from being forced out. After the tubing has been forced down until the two snubbers meet, the traveling snubber is then hoisted up the tubing for another bite, a few feet at a time if the pressures are excessive or a joint at a time if pressures are low.

The tubing collars are passed through the control heads by alternately opening and closing the rams in the upper and lower heads. By this method the rams in one of the



Cameron Snubbing Device

heads is always closed around the tubing. The rams are packed with a hydraulic packing. After sufficient tubing has been snubbed to overcome the pressure of the well it can then be run-in in the usual method, under its own weight. When the desired amount of tubing is in the well, the rams in the lower head are closed and the joint above backed out. A special landing nipple attached to the joint in the well and the tubing allowed to remain suspended in the well on the tubing control head rams.

After the joint has been backed out the disc or trip valve is released, the gate valve closed and the Christmas tree installed. After all tank connections have been made the gate valve is opened, the casing side outlets closed and the well then produces through the tubing.

The rams in the tubing control heads are actuated by lever-jacks for speed and lock screws for force.

To determine the approximate force required to snub tubing into the well, use this formula: Pressure of well (pounds per square inch) multiplied by the area of the tubing (O.D.) in square inches plus 350 pounds (friction) will equal pounds of force necessary for snubbing in the tubing. This result divided by the weight (pounds) per foot of the tubing will give you the number of feet of tubing necessary to run before its weight will overcome the well pressure into the well by its own weight.

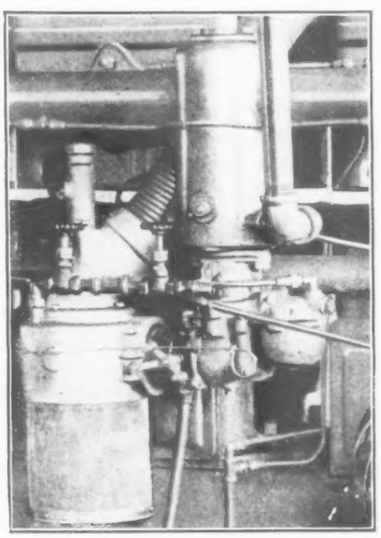
In other words, if a well has 1000 pounds pressure and you are snubbing in the first joint of tubing—½" A.P.I. (1.90" O.D.), weighing approximately 2.9 pounds per foot, the pull down force required would be, approximately: (1000 x 2.83) + 350 = 3180 pounds.

The total length of this size tubing to be snubbed in before its weight overcomes well pressure will be approximately: 3180 — 2.9 = 1096.5 feet.

Distillate Burning Engines

CLIMAX ENGINEERING COMPANY

Climax Engineering Company, Clinton, Iowa, and Chicago, is using a standard carburetor with slight modifications to permit the use of more viscous fuels to obtain its process of carburetion in the new Blue Streat distillate burning engines.



Climax Engine

In order to provide flexibility necessary for the handling of different loads and speeds the heat is to be supplied to the fuel mixture is varied automatically with the load. The mechanism consists of an aluminum casting attached to the carburetor, comprising a sylphon, air valve, water injection valve and an air cleaner. An automatic control operating from the load of the engine also is part of this mechanism.

Copper tubing connects the sylphon to the intake manifold so that pressure changes caused by different loads are transmitted to the slyphon, creating a motive power which causes operation of a valve that controls the supply of heated and unheated air admitted to the carburetor. The sylphon expands when the manifold pressure rises, causing the valve to move which reduces the intake of hot air until at wide open throttle none is used permitting only the unheated air to pass into the carburetor.

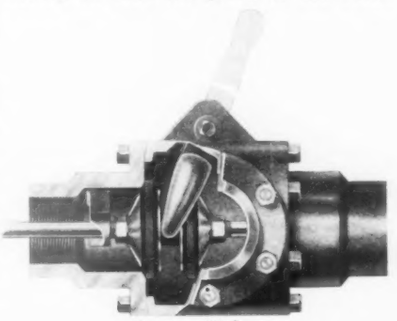
When a demand for power output exceeds three-quarters load the sylphon opens a valve connected to the spring loaded needle valve which controls the supply of water to the fuel mixture. An A-C fuel pump developing from three to four pounds pressure is used to pump the water only when the load exceeds three quarters. Full load operation without undue pinging is obtained by using approximately two-tenths of a pound of water per horsepower hour. No water is supplied on loads corresponding to less than three-quarter throttle opening.

In the starting process gasoline is used until the engine is warmed up. The supply of gasoline is then cut off and the lower grade fuel admitted.

Valve

BRAUER MACHINE & SUPPLY COMPANY

Brauer Machine & Supply Company of Oklahoma City has a new valve perfected to take the place of the commonly used gate valves in stand pipes.



Brauer Valve

Of rugged construction the Brauer valve is operated by a hand lever which permits ease of operation in switching from one stand pipe to the other. Changing and repairing the ordinary valves in this kind of work is done away with. It is automatically drained which entirely eliminates any danger from freezing in cold weather.

More detailed information may be obtained by communicating with the manufacturer direct.

Worthington Pump & Machinery Corporation's Bulletin S-500-B2A, just off the press, is a pictorial bulletin for filing in loose-leaf form, and deals with the company's vertical four cylinder air injection Diesel engine. Illustrations used throughout the 44 pages show every part of these Diesels separately, and also the engine built up and installed. The company's executive offices at 2 Park avenue, New York City, will furnish a copy of this bulletin upon request.

In the advertisement of C. L. & W. W. Auer, which appeared on page 280 of The Oil Weekly of August 1, was the statement that "Seep" cups are manufactured from "scored" leather.

No doubt, all production men understood that the word which should have been used was "scoured," as "scored" leather in the use of cups would not be anything to brag about.

This correction is gladly made.

Manufacturer and Supply Dealer Notes

A. O. Smith Corporation, Milwaukee, has completed the first of its manufacturing units, an automatic frame plant, which is as nearly 100 per cent automatic as it is economical to make a factory. The designing of the factory and its intricate machinery centered on the elimination of human handiwork, making it, by today's standards, machine perfect.

This one extreme will be matched on the other hand by the Engineering and Research Building—a seven story building now under construction—by a unit centered solely on the work of men.

The production in this new factory will be the result of the scientific human element where men's brains, and not their hands, will be the major operating factor. Carefully selected research men will eventually carry on the work of invention and discovery with facilities that have often been the dream, but never the realization, of every research man.

The force of engineers now working with the company already records among its achievements the development of the revolutionary pipe mills, automatic frame plant and the welding plants, and other contributions to the scientific information and working principles of the industry that the company is now serving.

Gray Instrument Company, 64-70 West Johnson Street, Germantown, Pennsylvania, has issued a special eight-page illustrated reduced price list of "Queen" electrical measuring instruments, including potentiometers, Kohlrausch slides, resistance boxes, Wheatstone bridges, conductivity cells and electrode vessels. A copy of this list will be furnished upon request to the address given here.

Sullivan Machinery Company, 400 North Michigan avenue, Chicago, has issued Bulletin 83-T describing the Sullivan "WL-22" and "WL-44" vertical single stage air compressors direct driven by electric motors. These units are built in capacities from 120 to 240 feet, the larger unit being a four-cylinder machine; the two pairs of cylinders being set at right angles with each other. Catalog 83-X is devoted to covering the company's straight line compressors.

The Sullivan "WG-6" straight line single stage compressors of the familiar belt driven type are described in this 16-page catalog and fully illustrated. Catalog 83-Z covers the high pressure compressors in four pages. Described here are the vertical two-stage compressors, both belt driven and direct connected, for small unit capacities in pressures from 150 to 400 pounds per square inch. Copies may be obtained by writing the company at the address above or to any of its branch offices.

Parker Appliance Company, 10320 Berea Road, Cleveland has recently issued Bulletin 23L, covering the Parker triple tube couplings, which mark a new improvement in pipe connections. The primary feature in these new couplings is economy in installation and maintenance. Bulletin No. 23L, with other literature issued by the company, describes in detail, with illustrations, the working of these couplings, and gives a complete price table.

Youngstown Sheet & Tube Company, Youngstown, Ohio, has published a 96-page booklet on tubular goods. It is a handsomely bound booklet, carrying inserts in color and bound so that the sheets may be interchanged to keep the booklet up to date in information. It was prepared as a special service to users of tubular goods, who may have a copy upon request if one has not already been received. Also, the latest information is available on new sheets, as changes are made.

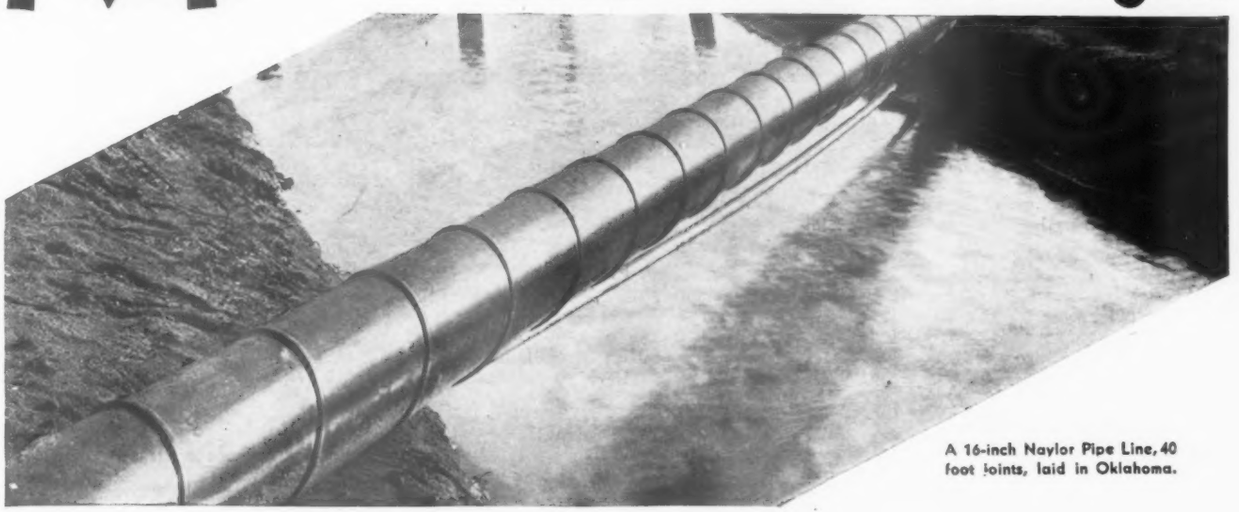
Superheater Company, 60 East 42 Street, New York City, has issued Bulletin T-20, a 16-page catalog describing and illustrating the design, construction and application of the Elesco firetube superheater to oil-country boilers, and will mail a copy to interested persons upon request.

This bulletin deals with a new Elesco development for reducing the cost of oil well drilling operations. With the aid of test data taken under normal drilling conditions, it explains how high-degree superheated steam speeds up oil well drilling, thus increasing capacity with resultant increased revenue from capital investment.

Oil country boilers equipped with Elesco superheaters were set up and operated beside saturated steam boilers. To obtain a true comparison of the advantages of use of preheated steam presented over use of saturated steam, each set of boilers was operated for alternate periods of 24 hours throughout the duration of the 18-day test. Operation of the drilling rig and firing of both sets of boilers were done by the regular drilling crew. A full report of this test with results obtained is included in the bulletin.

Though use of superheated steam is relatively new in oil well drilling operations, the design, construction and application of the Elesco firetube superheater for these services are, in general, similar to that of the Elesco superheater applied to nearly 57,000 American-built locomotives.

Maximum Structural Strength



A 16-inch Naylor Pipe Line, 40 foot joints, laid in Oklahoma.

Why It Is Inherent In Naylor Pipe

MAXIMUM structural strength is assured in Naylor Pipe by *distinctive* engineering features never before used in any pipe.

Bulky wall thicknesses are not relied upon to give Naylor Pipe its strength. On the contrary...the *electrically welded* spiral lock-seam truss provides a mechanically correct structure that stands the stress of the loads carried.

Not only that...but the spiral lock-seam truss structure of Naylor Pipe provides this great strength at 50% reduction in weight, as compared with standard weight wrought pipe.

Moreover, Naylor Pipe structure provides for expansion and contraction within the pipe itself. The welded spiral lock-seam truss acts as a continuous expansion joint, relieving the stresses and strains that would ordinarily be set up by changes in temperature.

Ask our nearest Sales Office---or write direct to us---for more complete information and data. But in the meantime, remember....

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MONTREAL, CANADA: Mechanical Equipment Company, 660 St. Catherine St., West

Standardized Naylor Pipe is made in sizes 6" to 12" I. D. and 14" to 20" O. D. in any uniform length desired up to 40'0". Ends made to wrought pipe standards for all types of coupling.

TONCAN COPPER

Naylor Pipe

Maximum Structural Strength Mo-lyb-den-um With Minimum Weight

IRON

Where corrosion is not a problem, Naylor Pipe can be furnished in steel.

Toncan Copper Molybdenum Iron possesses a superior corrosion resistance making it the favored pipe material.

USE
APPLEMAN
GUMBO BITS
for
Maximum Footage
at Minimum Cost

WATER COURSES
Note that water courses lead direct to cutting edge. This design has accomplished a maximum cooling effect. The cuttings are rapidly broken up and washed away in solution thus obviating choking-up.

SELF-SHARPENING EDGES
A principle in the design is that the blades are formed concavely favoring cutting edges for both bottom and side of hole. Attained by hard facing, permitting wear on back to retain cutting edge.

SIDE WALL CUTTING
The cutting edge is so constructed that it cuts side wall as it drills. This feature accomplishes a full round hole and a well prepared side wall. Holds guage longer. This side wall cutting function makes reaming rarely necessary.

Write for
Complete Information

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BEAUMONT, TEXAS

Squeaks from the Bull Wheel

The duffer had been struggling around for some time. Finally his feelings got the better of him and he exclaimed to his caddy:

"Terrible course, caddy, terrible course!"

Replied the caddy: "Sorry, sir, but this ain't the course. You got off the course an hour ago."

"Say," remarked the peevish party at the table. "How long have you been working in this restaurant?"

"Six weeks, sir," replied the waiter.

"Then, I beg your pardon," apologized the peeved one. "It could not have been you I ordered the steak from."

Isaac—Und vot brice shall I pud on dese white duck trousers?

Jacob—Four und a half a pair.

Isaac—But dey only cost 45 cents a pair.

Jacob—I don'd care vot dey cost. Dis iss a closing-oud sale, regardless of cost.

1st Stude—What shall we do tonight?

2nd Stude—I'll spin a coin. If it's heads we'll go to the movies; tails we go to the dance, and if it stands on edge we'll study.

Caller—How do you know it is almost five o'clock?

Boss—My office force is showing signs of activity.

Crappie—Bill Rhodes was just saying he caught a mermaid in his nets.

Muskie—What did he do with it?

Crappie—His wife made him throw it back again.

Gumbo—Wheezer is going to retire from business for five years.

Mudd—Oh, I've heard him say that before.

Gumbo—Yes, but this time the judge said it.

Papa—Willie, I heard that instead of going to Sunday school you played baseball.

Willie—It isn't true, Dad—and I've got a string of fish to prove it.

"It was grand of you to dive from that great height, fully clothed, to rescue that man from drowning," exclaimed the looker-on.

"Oh, that's all very well," the hero replied; "but what I want to know is—who pushed me in?"

Kind Lady—There's the wood pile.

Hobo Hank—Sorry, madam, I'm not a woodchopper. I'm just a tramp, a vagabond.

Kind Lady—Oh, in that case here's a quarter. Let's hear you croon.

Lisping Lou—Could you do thomething about my baby? Heth's teething——

Doctor—All babies do that.

Lisping Lou—Yeth, but he'th teething that bulldog necth door.

Gunbusta—My wife has more lives than a cat.

Pistola—How do you know?

Gunbusta—Curiosity has killed cats.

While dining in an old, run-down oil town in the town's only cafe, although the cafe signs were plentiful, a diner asked the old lady in charge:

"Has the bank that closed some time ago, ever paid anything?"

"Oh, yes," replied the old lady, "they've paid a little. They paid 60 per cent one time, 30 another and I think it was 20 per cent they paid the last time. Then they just quit and didn't pay any more."

While trying to get a lease for a pump station at Mexia, several locations were examined before final choice was made; but the old negro who owned the property, was too high in his demands. In order to get him down to earth, the agent told him that he would have to deal with another negro who had a lease, if the price wasn't lowered.

"White man," the old negro quickly replied, "you can't lease that land."

"Why not," replied the agent, "haven't I just talked with the owner who agreed to let me have it?"

"Dat may be so," replied the old darkie, "but dat land am all in literature."

While securing right-of-way for a pipe line through a negro community, a negro was approached by the agent who told him his story about the company he represented and the proposed line which was to cross his cotton patch, promising to pay him liberally for damage done.

"That's all right, white folks," assented the negro, "just go right ahead and lay your line cause I's easy to get along with. I's not like that nigger down the road what held de gang up. I's not contagious about anything."

In trying to locate another negro after getting the old parson signed up, an agent asked the parson what kind of a man the other negro was, and what he looked like.

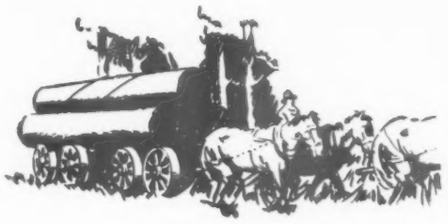
"You'll find dat nigger roun' some of dem nigger dumps up in town," the old parson replied. "He's a long, tall nigger."

"Is he an elderly man," interrupted the agent?

"Well to tell de truth," the parson replied, "I don't know much about his habits."

Neighborhood Pest: "Have you got a vacuum cleaner?"

Little Girl: "No, Mama says our vacuum never gets dirty."



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Years of rough usage in logging camps . . . oil fields . . . lumber yards . . . everywhere that rough roads and heavy loads test the real strength of a wagon . . . have proved beyond a doubt that "a Martin never fails."

Our patent adjustment on tongue and coupling, combined with Martin's easy-turning qualities, make these sturdy wagons just as easy to handle on hills and in swamps as over smooth highways. No matter how heavy the load, a Martin always comes through.

Constructed of the best grade of oak and hickory, reinforced with steel. Seventeen years of manufacturing experience insure their excellence. No task is too great for a Martin. It always comes through.

MARTIN WAGON CO.
LUFKIN, TEXAS

"MARTINS HAUL ANYTHING"

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for DEPENDABLE QUALITY
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Regardless of your tube needs—you will find us able to serve you in a dependable and economical manner. Immediate shipment can be made from a warehouse located in your near vicinity.

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Today—write us about your standard or special requirements.

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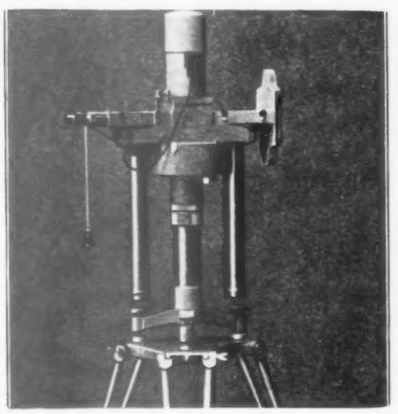
BOILER TUBES

THE SMALL TORSION-BALANCE

EASILY PORTABLE BY ONE MAN

An instrument for all types of geological prospecting work.

Weight: 15.5 kg. net=34.2 lbs. net



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Unequalled in operating when changing stations.

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This Outside (drill pipe) Cutting Tool, together with a skilled operator is rented on a contract basis. This arrangement guarantees absolute satisfaction and positive results. It is the most economical method of removing stuck and crooked drill pipe from the hole.

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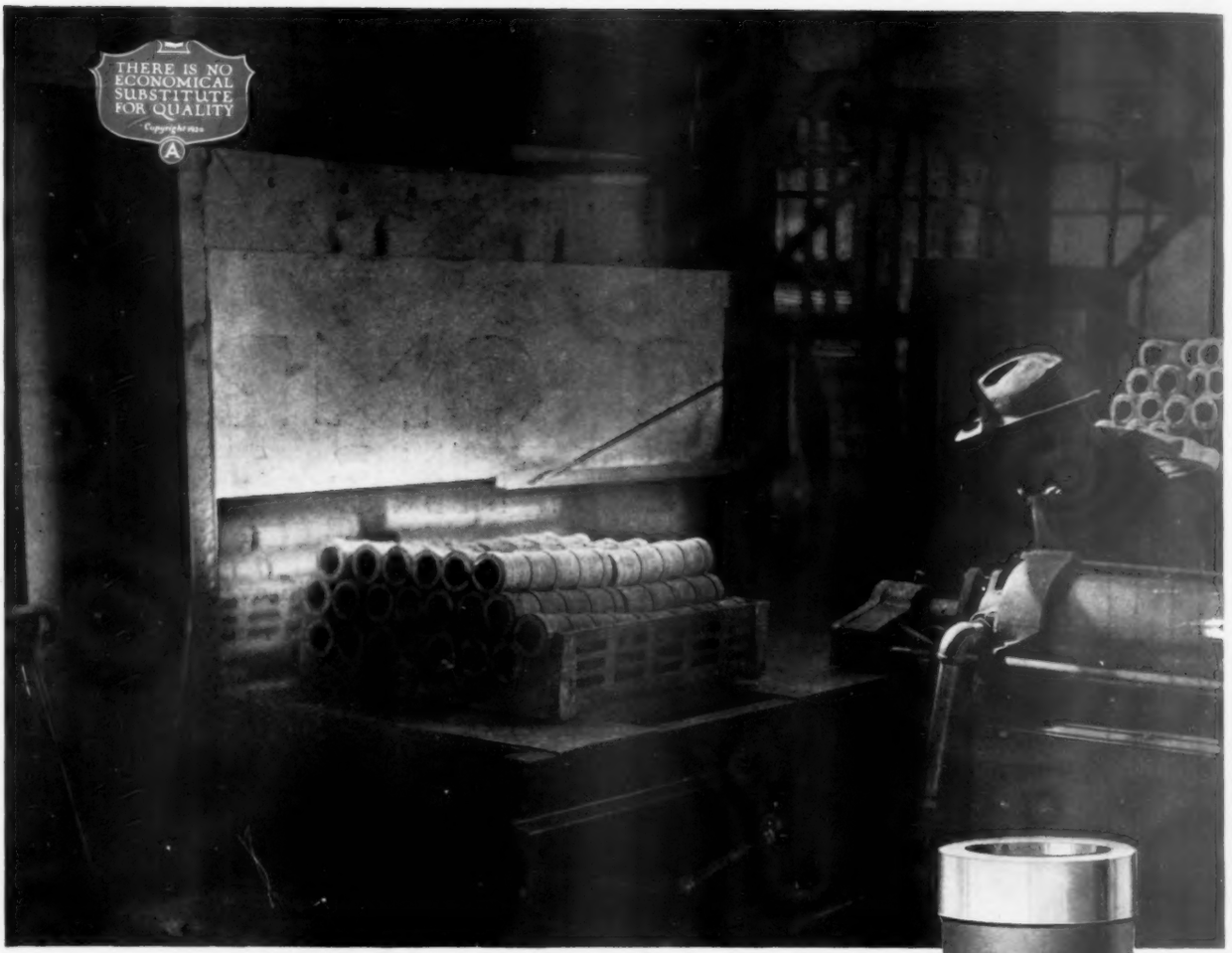

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Any stresses or strains set up in the casting are normalized and eliminated by the heat treatment. Passing through the electrically controlled furnaces Axelson Liners are held to a temperature with a variation of only five degrees.

This rigid heat treatment results in uniformity of metal, added strength to withstand heavy loads, and added life.

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